Folder 1

Cinchona Project

Pending file

Determination lists + letters

Send
Kerf
add'l labels

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Loan no. 60

Hodge entered in list Oct 21 1947

ORCHID HERBARIUM OF OAKES AMES
BOTANICAL MUSEUM, HARVARD UNIVERSITY
OXFORD STREET, CAMBRIDGE 38, MASSACHUSETTS

May 8, 1947.

Dr. S. F. Blake,

Bureau of Plant Industry,

Beltsville, Md.

Dear Sidney:

Recently I received 16 sheets of orchids, including the 11 numbers which I have been angling for since the early part of the year. These Peruvian collections made by Walter Hodge are very interesting, and I plan to add the data furnished by them to my overgrown and wayward child, the Orchid Flora of Peru, which has now grown of age. Until I can return them, however, I shall herewith send the determinations as follows.

Hodge 6146 = Erythrodes sp. (fl. poor) 1498a
" 6142 = Pleurothallis Mathewsii Lindl.
" 6147 = Epidendrum cornutum Lindl. (2 sheets) 1614
" 6155 = Lepanthes sp.
" 6150 = Pseudocentrum bursigerum Reichb.f.
" 6138 = Liparis elegantula Kränzl.
" 6143 = Epidendrum cylindrostachys Rchb.f & Warsc. 1614
" 6140 = Telipogon radiatus Rchb.f.
" 6152 = Malaxis termensis (Kränzl.) C.Schweinf.
" 6115 = Maxillaria arbuscula Rchb.f.

Stork & Horton 9436 = Bletia catenulata Ruiz & Pav.

Schunke 41 = Rodriguezia Batemanii Poepp. & Endl.
" 124 = Epidendrum macrothyrsis Lehm. & Kränzl.

Prescott 182 = Oncidium serratum Lindl.
" 166 = Epidendrum brachyphyllum Lindl.

none in set II Oct 19 1951

Thank you sending these specimens and expediting their journey.

I hope that you and your family are in the best of health and happiness and that I may have a chance to entertain you when you come this way.

Your very sincerely,

Charles Schweinfurth

Charles Schweinfurth

Research Fellow in Botany, Harvard University

Answered by
Postal Card
5-/13/47 EM.

April 29, 1947

Mr. Charles Schweinfurth
Botanical Museum
Oxford Street
Cambridge 38, Massachusetts

Dear Charles:

Under separate cover we are sending you 16 sheets of orchids collected by Dr. W. H. Hodge in Peru. It is our Loan No. 60. I trust that these reach you safely and prove of interest.

Sincerely yours,

S. F. Blake
Senior Botanist

SFB/emn

Cinchona Project

(named by Jose Cuatrecasas) Comunicated Nov.1952

Core

215 Senecio formosoides Cuatr.
272f Diplostephium adenachaenium Blake
375 Senecio danielis Cuatr.
406 Diplostephium rupestre Wedd.
455 trianae Hieron. Jungia
624 Senecio corei Cuatr., type collection

Drew

E-81 Chaptalia cordata Hieron.
E-98 " " "
E-117 Werneria pygmaea Gillies
E-151 Gynoxys tolimensis Cuatr.
E-211 Werneria pumila HBK.
E-219 Senecio andicola Turcz.
E-255 Senecio formosoides Cuatr.
E-278 Gynoxys fuliginosa (HBK)Cass.
E-307 Werneria pumila HBK.
E-308 Senecio nivalis (HBK)Cuatr.,fma.sabulosus Cuatr.
E-321 Diplostephium spinulosum Wedd.
E-420 Senecio cayambensis Cuatr., type collection
E-478 Liabum tabanense Cuatr., fma.
E-499 Mutisia intermedia Hieron.

Ewan

15982 Diplostephium floribundum subsp.aequatoriense Cuatr.
15983 Diplostephium rhododendroides Hieron.
15984 Diplostephium adenachaenium Blake
15985 Senecio weinmannifolius Cuatr., fma.
16089 Mutisia ochroleuca Cuatr., type collection
16096 Senecio chionogeton Wedd.
16212 Senecio chingualensis Cuatr., type collection
16323 Werneria humilis HBK.
16398 Werneria nubigena HBK
16407 Werneria pumila HBK.
16430 Senecio tephrosioides Turcz.
16441 Senecio andicola Turcz.fma.psuedonitidus Cuatr.
16457 Senecio formosoides Cuatr., var.
16536 Diplostephium rhododendroides Hier.,fma.cochensis (Hier.)Cuatr.

Grant

10791 Diplostephium grantii Cuatr., type collection
10848 Senecio albotectus Cuatr., type collection
10854 Senecio perijaensis Cuatr., type collection
10862 S. oppositicordius Cuatr., type collection (Senecio)
10865 Diplostephium crassifolium Cuatr., type collection

Little

7056 Brunellia cf.propinqua HBK (deficient specimen)
7506 Brunellia littlei Cuatr., type collection
8058 " " paratype
8501 Senecio suazaensis Cuatr., type collection
8729 Brunellia mollis Cuatr., paratype
8795 Brunellia mollis Cuatr., type collection

Chinchona project

(Named by Jose Cuatrecasas; communicated Nov.1952)

Fosberg

19861 Senecio tamaensis Cuatr.
19972 Senecio theaefolius fma.setulosus (Klatt)Cuatr.
20111 Senecio silvascandens Cuatr.
20671 Senecio reissianus Hieron.
20700 Gynoxys paramuna Cuatr.
20734 Werneria pymaea Gill.
20786 Senecio vernicosus Wedd.
20791 Senecio summapacis Cuatr., type collection
20912 Diplostephium fosbergii Cuatr., type collection
20971 Diplostephium phylicoides (HBK)Wedd.
21188 Mutisia huacensis Hieron.
21699 Senecio nitidus (HBK)DC.
22267 Senecio abietinus Willd.,fma.aciculatus(Cuatr.)Cuatr.
22273 Valeriana
22284 Baccharis densifolia Rusby
22285 Senecio pungens fma.microchaete (Benth.)Cuatr.
22287 Gynoxys trianae Hieron.
22298 Jungia stipulifera Cuatr.
22338 Diplostephium adaenachaenium Blake
22946 Senecio fosbergii Cuatr., type collection

Fosberg & Giler

22629 Werneria pygmaea Gillies
22632 Werneria nubigena HBK

Fosberg 21603: Senecio angosturae Cuatr.type collection

St.John

20759 Werneria pygmaea Gillies
20788 Senecio adglacialis Cuatr., fma.
20799 Diplostephium glutinosum Blake

Dec 1957

Cinchona Project

Brunelliaceae for naming to Dr. José Cuatrecasas

u = unicate

F.R.Bosberg
No.

21155 Brunellia tomentosa H.& B.

22783 Brunellia ovalifolia H.& B.

M.L.Grant
No.

9556 Brunellia colombiana Cuatr.

E.L.Little
No.

7056 Brunellia aff.propinqua HBK (deficient specimen)

u 7253 Brunellia sibundoya Cuatr.

7283 Brunellia comocladifolia H.& B.

7506 Brunellia littlei Cuatr., type collection

8058 " " " paratype

8729 Brunellia mollis Cuatr. , paratype

8795 " " " type collection

u 9024 Brunellia sibundoya Cuatr.

Andean Compositae of the "Cinchona project"

Det.J.Cuatrecasas (April,1952)

Core:

272-f Diplostephium adenachaenium Blake
406 Diplostephium rupestre Wedd.
455 Jungia ferruginea L.f.

Drew:

E-98 Chaptalia cordata Hieron.
E-81 " "
E-117 Werneria pygmaea Gillies
E-211 Werneria pumila HBK.
E-307 " "
E-321 Diplostephium spinulosum Wedd.
E-499 Mutisia intermedia Hieron.

Ewan:

15982 Diplostephium floribundum subsp.aequatoriense Cuatr.
15983 Diplostephium rhododendroides Hieron.
15984 Diplostephium adenachaenium Blake
16089 Mutisia ochroleua Cuatr., TYPE-collection
16323 Werneria humilis HBK.
16398 Werneria nubigena HBK (W.disticha HBK)
16407 Werneria pumila HBK.
16536 Diplostephium rhododendroides Hier.fma.cochensis(Hier.)Cuatr.

Fosberg:

20734 Werneria pygmaea Gill.
20912 Diplostephium fosbergii Cuatr., Type-collection
21188 Mutisia huacensis Hier.
22273 Valeriana (to name Mr.Killip)
22298 Jungia stipulifera Cuatr.

Fosberg & Giler:

22629: Werneria pygmaea Gillies
22632 Werneria nubigena HBK.

Grant:

10791 Diplostephium grantii Cuatr. TYPE-collection
10865 Diplostephium crassifolium Cuatr. TYPE-collection

St.John:

20759 Werneria pygmaea Gillies
20799 Diplostephium glutinosum Blake

192866

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D. C.

June 6, 1952

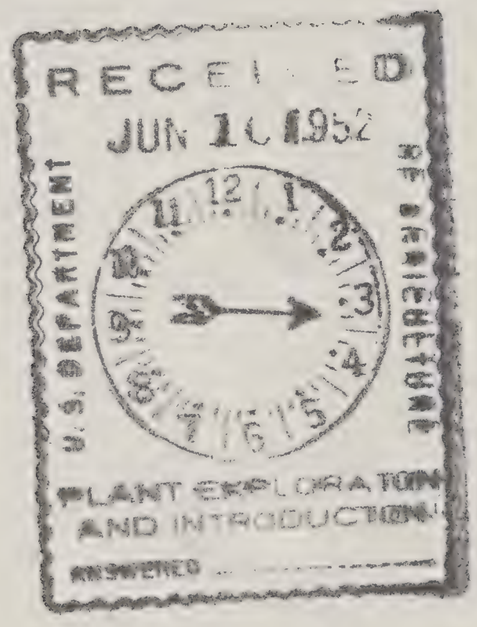
Dr. W. A. Archer
Herbarium of the National Arboretum
Beltsville, Maryland

Dear Bill:

I am enclosing a list of identifications of 316 of the specimens of South American ferns that you transmitted some time ago. I'll get at the remainder as soon as practicable.

Yours sincerely

C. V. Morton
Curator
Division of Ferns



South American ferns collected on the Cinchona Project, received through W. A. Archer (Mus. no. 192863)

Identified by C. V. Morton, U. S. National Museum, May, 1952

Core

85 Polypodium lanceolatum L.
225 Blechnum loxense (H.B.K.) Hieron.
574 Polypodium crassifolium L.
634 Rhipidopteris flabellata (B. & B.) Fée
671 Trichomanes elegans L. C. Rich.
806 Rhipidopteris peltata (Swartz) Schott
892 Polypodium angustifolium Swartz
1365 Asplenium auritum Swartz
1369 Polypodium crassifolium L.
1518 Pityrogramma calomelanos (L.) Link
1566 Nephrolepis duffii Hort.

Ewan

16865 Trichomanes elegans L. C. Rich.

Fassett

25051 Trichomanes capillaceum L.
25153 Polypodium aureum L.
25184 Pteridium aquilinum var. arachnoideum (Kaulf.) Herter
25259 Rhipidopteris peltata (Swartz) Schott
25260 " " " "
25549 Polypodium duale Maxon
25574 " " "
25951 Pteridium aquilinum var. arachnoideum (Kaulf.) Herter

Fosberg

19105 Rhipdiopteris peltata (Swartz) Schott
19113 Rhipidopteris peltata (Swartz) Schott
19165 Blechnum schomburgkii (Klotzsch) C. Chr.
19187 Blechnum columbiense var. bogotense Hieron.
19233 Anemia hirsuta (L.) Swartz
19307 Polypodium percussum Cav.
19359 " " "
19360 Asplenium auritum Swartz
19367 Blechnum gracile Kaulf.
19368 Anemia phyllitidis (L.) Swartz
19369 Blechnum fraxineum Willd.
19405 Pteris altissima Poir.
19406 Pteris sp. Juvenile. Perhaps P. altissima Poir.
19441 Blechnum gracile Kaulf.
19444 Blechnum unilaterale Swartz
19444a Blechnum asplenioides Swartz
19455 Lindsaea lancea (L.) Bedd.
19460 Vittaria lineata (L.) J. E. Smith mixed with Polypodium angustifolium Swartz
19467 Adiantopsis radiata (L.) Fée
19470 Adiantum elegantulum Maxon. Second known collection.
19472 Adiantum patens Willd.

Fosberg (continued)
19510 Polypodium duale Maxon
19539 Blechnum falciforme (Liebm.) C. Chr.
19548 Blechnum acutum (Desv.) Mett.
19550 Salpichlaena volubilis (Kaulf.) J. Smith
19551 Salpichlaena volubilis (Kaulf.) J. Smith
19566 Polypodium duale Maxon
19576 Polypodium fraxinifolium Jacq. (depauperate)
19617a Loxoscaphe theciferum (H.B.K.) Moore
19637 Asplenium auritum Swartz
19694 Asplenium monanthes L.
19722 Blechnum occidentale L.
19751 Polypodium repens Augl.
19752 Asplenium auritum Swartz
19806 Anemia phyllitidis (L.) Swartz
19840 Dicranopteris flexuosa (Schrad.) Underw.
19862 Blechnum lechleri Mett.
19863 Blechnum lechleri Mett.
19867 Polypodium glaucophyllum Kunze
19892 Blechnum arborescens (Klotzsch & Karst.) Hieron.
19900 Polypodium funckii Mett.
19949 Hymenophyllum fucoides (Swartz) Swartz
19971 Hymenophyllum ruizianum Klotzsch
20082 Pityrogramma tartarea (Cav.) Maxon
20114 Hymenophyllum microcarpum Desv.
20126 Blechnum polypodioides (Swartz) Kuhn
20147 Eschatogramme desvauxii (Klotzsch) C. Chr.
20209 Polystichum pycnolepis (Kunze) Moore
20239 Blechnum loxense (H.B.K.) Mxxxx Hieron.
~~20282 Blechnum loxense (Hxxxx) Mxxxx~~
20281 Notholaena aurea (Poir.) Desv.
20282 Cheilanthes lendigera (Cav.) Swartz
20283 Pityrogramma tartarea (Cav.) Maxon
20284 Asplenium praemorsum Swartz
20285 Pellaea sagittata (Cav.) Link
20306 Cheilanthes marginata H.B.K.
20342 Trichomanes lucens Swartz
20344 Kamesonia verticalis Kunze
20353 Blechnum pteropus (Kunze) Mett.
20364 Blechnum ensiforme (Liebm.) C. Chr.
20634 Blechnum sodiroi C. Chr.
20641 Polypodium lanceolatum L.
20642 Asplenium praemorsum Swartz
20661 Blechnum loxense (H. .K.) Hieron.
20702 Polystichum pycnolepis (Kunze) Moore
20773 Asplenium castaneum Cham. & Schlecht.
20866 Blechnum schomburgkii (Klotzsch) C. Chr.
20886 Vittaria filifolia Fée
20960 Vittaria filifolia Fée
20964 Hymenophyllum trichophyllum H.B.K.
20970 Blechnum schomburgkii (Klotzsch) C. Chr.
21062 Cheilanthes myriophylla Desv.
21245 Salpichlaena volubilis (Kaulf.) J. Smith
21266 Notholaena aurea (Poir.) Desv.
21267 Pellaea sagittata (Cav.) Link

Fosberg (continued)
21268 Cheilanthes lendifera (Cav.) Swartz
21269 Pellaea ternifolia (Cav.) Link
21270a Asplenium praemorsum var. laceratum Hieron.
21671 Asplenium auritum Swartz
21919 Trichomanes elegans L. C. Rich.
22051 Gymnogramma hirsutula Mett.
22161 Blechnum sodiroi C. Chr.
22188 Notholaena aurea (Poir.) Desv.
22201 Cheilanthes myriophylla Desv.
22261 Asplenium fragrans Swartz
22300 Asplenium praemorsum Swartz
22302 Polypodium lanceolatum L.
22304 Polypodium murorum Hook.
22353 Polypodium monosorum Desv.
22579 Notholaena sinuata Lag.
22582 Adiantum subvolubile Mett.
22583 Pellaea ovata (Desv.) Weatherby
22593 Asplenium praemorsum Swartz
22594 Cheilanthes myriophylla Desv.
22597 Polypodium thyssanolepis A. Br.
22660 Cheilanthes myriophylla Desv.
22778 Gymnogramma elongata H. & G.
22781 Blechnum buchtienii Rosenst.
22782 Gymnogramma glandulosa Karst.
22799 Blechnum loxense (H.B.K.) Hieron.
22804 Dicranopteris simplex (Desv.) Maxon
22963 Adiantum macrophyllum Swartz
23220 Polypodium sessilifolium Desv.

Giler
29 Asplenium praemorsum Swartz
38 Polypodium remotum Desv.
48 Polypodium murorum Hook.
49 Polypodium lanceolatum L.
59 Cyclophorus americanus (Hook.) C. Chr.

Granger
18 Asplenium fragrans Swartz

Grant
9003 Polypodium angustifolium Swartz
9004 Polypodium glaucophyllum Kunze
9005 Polypodium angustifolium Swartz
9042 Blechnum polypodioides (Swartz) Kuhn
9050 Asplenium fragrans Swartz
9065 Vittaria filifolia Fée
9066 Asplenium serra Langsd. & Fisch.
9089 Pteridium aquilinum var. caudatum (L.) Sadeb.
9094 Polypodium crassifolium L.
9095 Polypodium lanceolatum L.
9119 Gymnogramma retrofracta (H. & G.) Kunze
9126 Hemitelia horrida (L.) R. Br.
9159 Asplenium serra Langsd. & Fisch.
9160 Nephrolepis pectinata (Willd.) Schott
9183 Polypodium duale Maxon
9227 Trismeria trifoliata (L.) Diels

Grant (continued)
9228 Blechnum loxense (H.B.K.) Hieron.
9280 Asplenium hastatum Klotzsch
9292 Hymenophyllum microcarpum Desv.
9349 Asplenium harpeodes Kunze
9377 Polypodium caceresii Sodiro
9383 Polypodium lanceolatum L.
9399 Blechnum schomburgkii (Klotzsch) C. Chr.
9412 Blechnum loxense (H.B.K.) Hieron.
9470 Gymnogramma hirta (H.B.K.) Kaulf.
9471 Dryopteris pusilla (Mett.) Kuntze)
9530 Asplenium monanthes L.
9531 Pityrogramma ornithopteris (Klotzsch) Maxon?
9532 Dryopteris denticulata (Swartz) Kuntze
9572 Cheilanthes marginata H.B.K.
9691 Adiantum tinctum Moore?
9801 Lonchitis lindeniana Hook.
9803 Hymenophyllum microcarpum Desv.
9807 Asplenium hastatum Klotzsch
9815 Rhipidopteris flabellata (H. & B.) Fée
9851 Hymenophyllum fucoides (Swartz) Swartz
9855 Gymnogramma flexuosa (H. & B.) Desv.
9858 Dicranopteris velata (Kunze) Maxon
9867 Polypodium sprucei Hook.
9889 Gymnogramma sp.
9895 Asplenium formosum Willd.
9924 Polypodium lycopodioides L.
9930 Polypodium tectum Kaulf.
9931 Polypodium angustifolium Swartz
9932 Polypodium glaucophyllum Kunze
9939 Blechnum unilaterale Swartz
9993 Asplenium myriophyllum (Swartz) Presl
10022 Adiantum elegantulum Maxon
10024 Polypodium fuscopunctatum Hook.
10025 Asplenium rutaceum Mett.
10026 Trichomanes elegans L. C. Rich.
10104 Salpichlaena volubilis (Kaulf.) J. Smith
10124 Trichomanes capillaceum L.
10125 Polypodium repens Aubl.
10164 Hemidictyum marginatum (L.) Diels
10215 Hypolepis rigescens (Kunze) Fée
10242 Diplazium lehmannii Hieron.
10246 Dryopteris pusilla (Mett.) Kuntze
10249 Blechnum pteropus (Kunze) Mett.
10266 Gymnogramma hirta (H.B.K.) Kaulf.?
10270 Blechnum polypodioides (Swartz) Kuhn
10279 Pteris podophylla Swartz
10286 Hymenophyllum microcarpum Desv.
10287 " " "
10293 Polypodium glaucophyllum Kunze
10304 Polypodium yarumalense Hieron.
10308 Dryopteris denticulata (Swartz) Kuntze
10309 Polypodium funckii Mett.
10316 Trichomanes capillaceum L.
10381 Oleandra pilosa Hook.
10416 Eschatogramma desvauxii (Klotzsch) C. Chr.

Grant (continued)

10417 Polypodium caceresii Sodiro
10419 Polypodium bombycinum Maxon var.
10420 Adiantum terminatum Kunze
10421 Pteris fraseri Mett.?
14025 Asplenium radicans var. uniseriale (Raddi)
10426 Asplenium radicans L. (typical)
10432 Vittaria filifolia Fée
10435 Adiantum petiolatum Desv. sens. lat.
10455 Polypodium leucatomos Poir.
10447 Blechnum asplenioides Swartz
10450 Trichomanes pinnatum Hedw.
10466 Adiantum serrato-dentatum H. & B.
10518 Polypodium nigrolimbatum Jenm.
10561 Dryopteris pusilla (Mett.) Kuntze
10637 Blechnum loxense (H.B.K.) Hieron.
10651 Loxoscaphe theciferum (H.B.K.) Moore
10658 Polypodium glaucophyllum Kunze
10659 Polypodium angustifolium Swartz
10671 Vittaria filifolia Fée
10719 Pteridium aquilinum var. arachnoideum (Kaulf.) Herter
10728 Didymochlaena truncatula (Swartz) J. Smith
10733 Asplenium alatum H. & B.
10735 Antrophyum lineatum (Swartz) Kaulf.
10736 Trichomanes radicans Swartz var.
10739 Asplenium harpeodes Kunze
10742 Trichomanes capillaceum L.
10745 Vittaria filifolia Fée
10750 Dicranopteris bancroftii (Hook.) Underw.
10757 Dicranopteris nuda (Moritz) Maxon
10786 Polypodium glaucophyllum Kunze
10799 Phanerophlebia juglandifolia (H. & B.) J. Smith
10803 Blechnum lehmannii Hieron.
10805 Blechnum pteropus (Kunze) Mett.
10808 Asplenium harpeodes Kunze
10809 Diplazium lonchophyllum Kunze
10832 Pteris muricata Hook.
10833 Polypodium serripinnatifidum (Fée) Mett.
10838 Polypodium angustifolium Swartz var.
10893 Asplenium myriophyllum (Swartz) Presl
10894 Adiantum polyphyllum Willd.
10895 Polypodium crassifolium L.
10902 Blechnum fraxineum Willd.
10907 Pteris propinqua Agardh
10910 Polypodium fendleri D. C. Eaton
10915 Saccoloma domingense (Spreng.) Prantl
10943 Polypodium haplophlebicum A. C. Smith
10945 Dicranopteris seminuda (Klotzsch) Maxon
10947 Pteridium aquilinum var. arachnoideum (Kaulf.) Herter
10972 Polypodium angustifolium Swartz
10974 Polystichum pycnolepis (Kunze) Moore
10978 Blechnum loxense (H.B.K.) Hieron.
11009 Lygodium venustum Swartz

Hurtado
30 Polypodium crassifolium L.
31 Polypodium leucatomos Poir.

Ownbey
2609 Polypodium glaucophyllum Kunze
2612 Vittaria filifolia Fée
2621 Antrophyum lineatum (Swartz) Kaulf.
2627 Gymnogramma flexuosa (H. & B.) Desv.
2658 Dicranopteris bancroftii (Hook.) Underw.
2707 Hemitelia horrida (L.) R. Br.
2721 Polypodium tectum Kaulf.
2752 Asplenium rutaceum Kett.

St. John
20549 Adiantum grossum Kett.

Core
21 Lycopodium complanatum var. tropicum Spring
284 " clavatum L.
353 " cernuum L. var.
430 " pendulinum Hook.
709 " alopecuroides var. integerrimum Hook.
798 " " "
1212 " complanatum L. var.
1379 " jussiaei Desv.

Ewan
15737 " complanatum L. var.
16084 " reflexum Lam.
16358 " alopecuroides var. integerrimum Spring
16585 " complanatum L. v r.
16828 " cernuum L.
16897 " complanatum L. var.
25058 " clavatum L.
25117 " reflexum Lam.
25421 " cernuum L. var.
25626 " alopecuroides var. integerrimum Spring
25637 " clavatum L.
25638 " clavatum L.
25649 " complanatum L. var.
25684 " " " " tropicaum Spring
25805 " jussiaei Desv.
25855 "
25886 " complanatum var. tropicum Spring
25924 " " " "
25984 " jussiaei Desv.
26016 " complanatum var. tropicum Spring

Fosberg
19184 " complanatum var. tropicum Spring
19218 " jussiaei Desv.
20232 " jussiaei Desv.
20319 " complanatum var. tropicum Spring
21241 " trianae Hieron.
21545 " jussiaei Desv.

Fosberg (continued)

21567	Lycopodium	alopecuroides var. integerrimum Spring
22780	"	jussiaei Desv.
22842	"	complanatum var. tropicum Spring

Grant

9121	"	jussiaei Desv.
9250	"	complanatum var. tropicum Spring
9418	"	jussiaei Desv.
9482	"	alopecuroides var. integerrimum Spring
9560	"	clavatum L.
10795	"	jussiaei Desv.

Little

7012	"	jussiaei Desv.
7818	"	complanatum var. tropicum Spring
8162	"	jussiaei Desv.
8163	"	complanatum var. tropicum Spring
8178	"	jussiaei Desv.
8183	"	complanatum var. tropicum Spring
9174	"	complanatum var. tropicum Spring
9325	"	cernuum L.
9361	"	clavatum L.
9362	"	jussiaei Desv.

Interdepartmental Correspondance

TULANE UNIVERSITY

DETERMINATIONS FOR EWAN COLOMBIAN COLLECTIONS
sent to U. S. Nat. Arboretum,
March 29, 1952

Ewan no.:		Determined by:
16081	Solanum inopinum Ewan, Nat. Hist. Miscellanea 88:8. 1951. TYPE	
16104	Lepidium bipinnatifidum Desv.	C. L. Hitchcock
16181	Balantium coniifolium (Hook.)J. Sm.	Gordon P. DeWolf Jr.
16182	Cyathea divergens Kunze vel aff.	" "
16307	Alsophila caracasana Kl. vel aff.	" "
16424	Alsophila elongata Hook.	" "
16512	Dicksonia karsteniana (Kl.)Moore	" "
16583	Gaultheria scabra Willd. sens lat.	A. C. Smith
16622	Cavendishia cordifolia (H.B.K.)Hoer.	" "
16663	Dicksonia karsteniana (Kl.)Moore	Gordon P. DeWolf Jr.
16673	Alsophila rufa Fee	" "
16678	Schefflera sachamatensis Cuatr. TYPE	
16860	Alsophila oblonga Kl.	Gordon P. DeWolf Jr.
16882	Alsophila rufa Fee	" "
16898	Alsophila frigida Karst.	" "
16899	Lepidium bipinnatifidum Desv.	C. L. Hitchcock
16930	Alsophila rufa Fee	Gordon P. DeWolf Jr.
16941	Psammisia penduliflora (Dunal)Kl.	A. C. Smith
16949	Gaultheria buxifolia Willd.	" "

Interdepartmental Correspondence

TULANE UNIVERSITY

DETERMINATIONS FOR EWAN VENEZUELAN
COLLECTIONS OF 1945
(an incomplete list to
March 29, 1952)

Ewan number:		Determined by:
16940	Lycopodium complanatum var. tropicum	Ewan
16941	Psammisia penduliflora (Dunal)Kl.	A. C. Smith
16943	Blechnum occidentale L.	Ewan
16944	Elaphoglossum sporadolepis (Kunze)Moore	Ewan
16946	Vallea stipularis Mutis ex L.f.	H. Pittier
16949	Gaultheria buxifolia Willd.	A. C. Smith
16952	Polystichum pycnolepis vel aff. photo published in Amer. Fern Jour. vol. 40, pl. 12, 1950	Ewan
16961	Draba bellardii Blake	R. C. Rollins
16962	Draba bellardii Blake	" "
16966	Jamesonia canescens (Kl.)Kunze	Ewan
16971	Castilleia divaricata Benth.	F. W. Pennell
16972	Valeriana phylicoides (Turcz.)Briq.	E. P. Killip
16975	Elaphoglossum matthewsii (Fee)Moore	Ewan
16976	Elaphoglossum bellermannianum (Kl.)Moore vel aff.	Ewan

Entered in mem. book.
Oct 16 1951

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

COLOMBIAN CINCHONA MISSION UMBELLIFERAE
Det. Mathias & Constance, 1950.

Core - 213. Niphogeton ternata (Willd.) Math. & Const., ined.
— 379. Myrrhidendron glaucescens (Benth.) Coult. & Rose
— 982. Eryngium humile Cav. var. pulchellum Wedd.
— 1029. Sanicula liberta Cham. & Schlecht.
Drew E-266. Oreomyrrhis andicola (HBK) Endl.
E-433. Azorella pedunculata (Spreng.) Math. & Const., ined.
E-441. Azorella aretioides (HBK) DC.
E-466. Azorella aretioides (HBK) DC.
Fassett 25,124. Sanicula liberta Cham. & Schlecht.
25,186. Daucus montanus Humb. & Bonpl.
25,734. ditto.
25,739. Sanicula liberta Cham. & Schlecht.
25,846. Hydrocotyle Humboldtii A. Rich. var. macrophylla Mathias
25,865. Niphogeton ternata var. orientalis Math. & Const., ined.
Fosberg 19,047. Micropleura renifolia Lag.
19,048. Dichondra repens Forst. (Convolvulaceae)
19,692. Apium leptophyllum (Pers.) F. von Muel.
19,693. Daucus montanus Humb. & Bonpl.
19,748. Sanicula liberta Cham. & Schlecht.
19,801. Hydrocotyle Bonplandii A. Rich.
19,873. ditto.
19,917. Sanicula liberta Cham. & Schlecht.
19,919. Hydrocotyle Bonplandii A. Rich.
19,925. Hydrocotyle Humboldtii A. Rich. var. macrophylla Mathias
19,996. Daucus montanus Humb. & Bonpl.
20,095. Spananthe paniculata Jacq.
20,212. Niphogeton glaucescens (Kunth) F. Macbr.
20,241. Niphogeton ternata var. orientalis Math. & Const., ined.
20,511. Spananthe paniculata Jacq.
20,633. Apium leptophyllum (Pers.) F. von Muel.
20,635. Daucus montanus Humb. & Bonpl.
20,655. Niphogeton glaucescens (Kunth) F. Macbr.
20,719. ditto.
20,735. Oreomyrrhis andicola (HBK) Endl.
20,755. Alchemilla sp. (Rosaceae)
20,792. Niphogeton lingula (Wedd.) Math. & Const., ined.
20,794. Eryngium paniculatum Cav.
20,811. Niphogeton glaucescens (Kunth) F. Macbr.
20,821. Niphogeton ternata (Willd.) Math. & Const., ined.
20,915. Neonelsonia sp. (Cf. Bull. Torrey Club 76: 51. 1949.)
20,920. Niphogeton ternata (Willd.) Math. & Const., ined.
21,043. Daucus montanus Humb. & Bonpl.
21,185. Neonelsonia acuminata (Benth.) Coult. & Rose
21,300. Daucus montanus Humb. & Bonpl.
21,350. Niphogeton glaucescens (Kunth) F. Macbr.
21,357. Daucus montanus Humb. & Bonpl.
21,371. Apium leptophyllum (Pers.) F. von Muel.
21,490. Hydrocotyle grossulariaefolia Rusby
21,691. Niphogeton glaucescens (Kunth) F. Macbr.
21,716. Niphogeton Josei Math. & Const., ined.
21,907. ditto.
22,058. Niphogeton glaucescens (Kunth) F. Macbr.
22,347. Niphogeton ternata (Willd.) Math. & Const., ined.
23,234. Oreomyrrhis andicola (HBK) Endl.
Fosberg & Core 21,554. Emmeorhiza umbellata (Spreng.) K. Schm. (Rubiaceae)
Fosberg & Giler 22,581. Arracacia andina Britton
22,628. Azorella Lehmannii Hieron.

Fosberg & Hermann 21,390. Hydrocotyle sphenoloba Wedd.
Fosberg & Prieto 22,710. Sanicula liberta Cham. & Schlecht.
22,735. Neonelsonia acuminata (Benth.) Coult. & Rose
22,813. Azorella Lehmannii Hieron.
22,818. Arracacia Wigginsii Constance
Grant 9454. Apium leptophyllum (Pers.) F. von Muell.
10,857. Prionosciadium phylloideum Math. & Const., ined.
10,858. Eryngium paniculatum Cav.
Grant & Fosberg 9242. Niphogeton glaucescens (Kunth) F. Macbr.
9318. Hydrocotyle sphenoloba Wedd.
9337. Coriandrum sativum L.
9338. Petroselinum crispum (Miller) Mansf.
Ownbey 2833. Podostemon sp. (Podostemonaceae)
St. John 20,745. Niphogeton angustiseta (Wolff) Math. & Const., ined.
20,769. Niphogeton pusilla (Wedd.) Math. & Const., ined.

Mr. Edwin

UNIVERSITY OF CALIFORNIA

DEPARTMENT OF BOTANY
BERKELEY 4, CALIFORNIA

1 December 1950

Dr. W. A. Archer, Curator
The National Arboretum
Plant Industry Station, U.S.D.A.
Beltsville, Maryland

Dear Dr. Archer:

Herewith, I at last enclose a list of determinations on the Umbelliferae of the Colombian Cinchona Mission. Dr. Mathias visited us last week from Los Angeles, and we were finally able to put the finishing touches on the group of South American umbels with which we have been working for some time. The "last straw" was the disposition of a number of specimens of the genus Azorella, but we think that the names we have applied will "hold" at least until we can learn more about the group.

per Archer
(or Del) - folder

We expect to submit the revision of Hiphogeton for publication as soon as I can get it re-typed and sent off, and we have some additional odds and ends that we expect to get into print shortly. Where your specimens relate to such plans, I have carefully marked the names "ined." so there will be no mistake about using them in print or prematurely.

With so many specimens, I can't help trembling for fear I have omitted something; if you find I failed to report on any number, please let me know and I'll try to make amends. I shall return the unicate specimens (including one mounted one) to you in a few days, unless our mailing section deems it advisable to wait until after the rush of Christmas mail.

Again, please let me express my great appreciation for the opportunity to examine, and to obtain duplicates of, this very excellent collection. It has greatly facilitated our work, and we hope that our determinations may repay you, in part, for your kindness.

Sincerely,

Lincoln Constance

Lincoln Constance
Curator of Seed Plants

P.S. D'll return the Ewan collection with the unicates!

RECEIVED
DEC 11 1950
U. S. DEPARTMENT OF AGRICULTURE
PLANT EXPLORATION AND INTRODUCTION
ANSWERED

① Enter in lists
and ask if he wants
rest.

② Holograph ✓

22 sheets cappaid,
see 1 letter worthless

Capparidaceae identified by Hugh H. Iltis, Aug. 27, 1951

Core		
✓ 1053	Podandrogyne brachycarpa (DC.)Woods.	
Ewan		
X 15897	Cleome anomala HKB.	
✓ 16177	" "	
St.John		
✓ 20833	Podandrogyne coccinea (Benth.)Woods.	

✓ = Set I pulled for access
X = no spec. here. see if in dups. (perhaps among mounted sheets sent or loan)
✓ Entered in numer. list.
✓ Slips made for distribution.
O = Entered on labels

CINCHONA PROJECT

Dr. Ramon Ferreyra for naming

Monnina

E. L. Core No.

638 solandraefolia Tr. & Pl.
944 arborescens Ferreyra
1608 grandifolia Ferreyra sp. nov.

J. A. Ewan No.

15710 arborescens Ferreyra

N. C. Fassett No.

25157 aestuans (L. f.) DC.
25701 solandraefolia Fr. & Pl.

F. R. Fosberg No.

21220 phytolaccaefolia H.B.K.
21743 solandraefolia Fr. & Pl.
22326 salicifolia R. & P.
22547 salicifolia var. pilostylis Ferreyra
22623 salicifolia var. pilostylis Ferreyra

M. L. Grant No.

9006 subscandens Fr. & Pl.
9082 aestuans (L. f.) DC.
10269 rupestris H.B.K.

J. S. Granger No.

8 arborescens Ferreyra

E. L. Little No.

7229 subspeciosa Chodat
7678 subspeciosa Chodat
8684 aestuans (L. f.) DC.
9233 salicifolia R. & P.

M. Owenbey No.

2603 salicifolia var. pilostylis Ferreyra

H. St. John No.

20518 aestuans (L. f.) DC.
20743 aestuans (L. f.) DC.

Compositae

J. A. Ewan No.

16395 Barnadesia
16461 Barnadesia

F. R. Fosberg No.

21179 Chuquiraga

US = uniste kept by U S N H
Enlisted - foods

PARTIAL LIST OF DETERMINATIONS OF BROMELIACEAE
RECEIVED FROM THE NATIONAL ARBORETUM.

Bromeliaceae det. L. B. Smith
US — Core 625 Guzmania gracilior (Andre) Mez
— Core 1286 Tillandsia complanata Benth.
— Core 1492 Ronnbergia maidifolia Mez
— Core 1497 Elleanthus amplifolius Schltr.
— Drew E-298 Tillandsia incarnata H. B. K.
— Drew E-365 Guzmania diffusa L. B. Smith
— Drew E-544 Guzmania wittmackii (André) André ex Mez
— Drew E-569 Guzmania melinonis Regel
— Drew E-638 Pitcairnia nigra André
— Fassett 25433 Tillandsia adpressa André var. tonduziana (Mez) ~~L. B. Sm.~~
L. B. Smith
— Fosberg 19343 Tillandsia recurvata L.
— Fosberg 19586 Tillandsia schiedeana Stend.
— Fosberg 19587 Tillandsia recurvata L.
— Fosberg 19588 Tillandsia juncea (R. &. P.) Poir.
— Fosberg 19953 Guzmania gracilior (André) Mez
— Fosberg 21060 Tillandsia recurvata L.
— Fosberg 21121 Pitcairnia pungens H. B. K.
— Fosberg 21683 Puya nitida Mez
— Fosberg 21685 Puya trianae Baker
— Fosberg 22183 Tillandsia recurvata L.
— Fosberg 22585 Tillandsia latifolia Meyen var. divaricata (Benth.) Mez
— Fosberg 22601 Pitcairnia pungens H. B. K.
— Fosberg 23124 Puya eryngioides André
— Giler 33 Tillandsia incarnata H. B. K.
— Grant 9584 Tillandsia turneri Baker
— Grant 9591 Guzmania cryptantha L. B. Smith
— Grant 9734 Tillandsia archeri L. B. Smith
— Grant 10189 Puya floccosa (Linden) E. Morr.
— Grant 10374 Pitcairnia maidifolia (Morr.) Dene
— Grant 10713 Tillandsia recurvata L.
— Grant 10714 Tillandsia schiedeana Steud.

Dr. Lyman B. Smith, Acting Curator
Division of Phanerogams, Smithsonian Institution, Wash., D.C.
Mr. Gabriel Edwin, National Arboretum Herbarium
Plant Industry Station, Beltsville, Md.

August 2, 1950

We received the Bromeliaceae determinations on July 28th.

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. Gabriel Edwin, National Arboretum
Plant Industry Station, Beltsville, Maryland

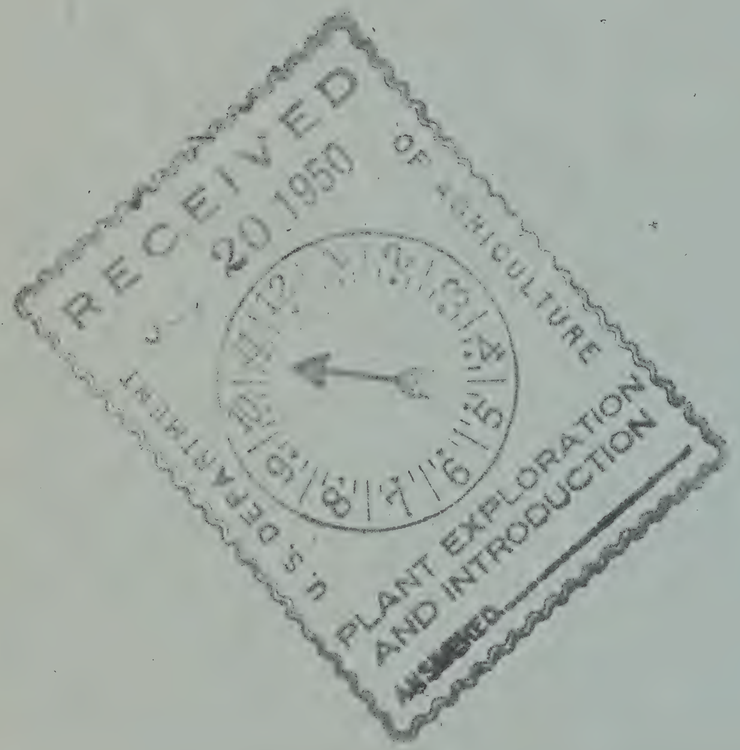
DATE: July 18, 1950

FROM : Lyman B. Smith, Acting Curator
Division of Phanerogams, Smithsonian Institution

SUBJECT:

Thank you for the 68 Bromeliaceae which just arrived. We note that 48 are duplicates and 20 are unicates. We are taking advantage of your generous offer to retain such unicates as are needed here by keeping 6 unicates. They are species not represented here and probably will prove to be new for the most part. The remainder will be returned as soon as named.

Nearly all the specimens are well prepared and most of them represent areas from which I have had little or no material.


RECEIVED
20 1950
U.S. DEPARTMENT OF AGRICULTURE
PLANT EXPLORATION
AND INTRODUCTION

Dr. L. B. Smith, Curator in the Department of Phanerogams, Smithsonian Institution, Washington, D. C.
Mr. Gabriel Edwin, National Arboretum Herbarium
Plant Industry Station, Beltsville, Md.
BROMELIACEAE FOR IDENTIFICATION.

July 12, 1950

The accompanying package contains a total of 68 specimens from the Cinchona Mission for identification. Under the usual understanding all specimens except unicates may be retained by you, even those unicates which you deem more valuable there than here may be retained.

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. Gabriel Edwin, National Arboretum,
Plant Industry Station, Beltsville, Md.

DATE: July 24, 1950

FROM : Lyman B. Smith, Acting Curator, LBS
Div. of Phanerogams, U.S. National Museum

SUBJECT: Identification of specimens of the National Arboretum.

Enclosed is a partial list of determinations of the Bromeliaceae received from the National Arboretum. The remaining collections consist of species not represented in the U.S. National Herbarium and, consequently, require considerable time for determination.

Enclosure

RECEIVED
JUL 27 1950
U.S. DEPARTMENT OF AGRICULTURE
PLANT EXPLORATION AND INTRODUCTION
ANSWERED

Entered in note books 12/50 GE

RECEIVED
JUL 26 1950
U.S. DEPARTMENT
OF AGRICULTURE
THE NATIONAL ARBORETUM
WASHINGTON
D.C.

Acanthaceae: Cinchona Project.

E. L. Core

u 825 Mendoncia lindavii Rusby
1322 Neriacanthus lehmannianus (Lindau) Lindau
1324 " "
u 1482 Blechum brownei Juss. f. puberulum Leonard
1501 Trichanthera gigantea (Humb. & Bonpl.) Nees
u 1558 Aphelandra cuatrecasasii Leonard (2 sheets) ined.
1619 " cucullata Leonard Type ined.

J. E. Ewan

15622 Stenandrium ewanii Leonard Type ined.
15628 Dicliptera ewanii Leonard Isotype ined.
15629 Pseuderanthemum ewanii Leonard Isotype ined.
15732 Aphelandra runcinata Klotzsch
16501 " gilva Leonard Type ined.
16785 Ruellia tubiflora H.B.K. var. parviflora Leonard Isotype

F. R. Fosberg

19131 Aphelandra coccinantha Leonard Type ined.
20160 Ruellia humboldtiana (Nees) Lindau
20386 Hygrophila guianensis Nees
21113 Aphelandra acanthus Nees
21438 Dicliptera assurgens (L.) Juss.
21445 Ruellia humboldtiana (Nees) Lindau
21809 Aphelandra trichota Leonard Type ined.
22136 Ruellia tuberosa L.

J. S. Granger et al.

10 Aphelandra grangeri Leonard Type ined.

M. L. Grant

9124 Aphelandra leucotricha Leonard Type ined.
9167 " atectmarta Leonard Type ined.
u 9319 " fosbergii Leonard Type ined.
9811 " quadrifaria Leonard Type ined.
10013 Ruellia grantii Leonard Type ined.
10363 Aphelandra thamna Leonard Type ined.
10388 Ruellia humboldtiana (Nees) Lindau
10431 Ruellia tubiflora H.B.K. var. tetrastichantha (Lindau) Leonard forma caesiolineata Leonard Type ined.
10706 Ruellia paniculata L.
10764 " macrophylla Vahl
11000 " "

E. L. Little

7930 Trichanthera gigantea (Humb. & Bonpl.) Nees
8030 Aphelandra porphyrocarpa Leonard Paratype ined.

Ewan 15741

Carapa aff auvelana

Pl. & Pl.

Sec. Colombia det Ewan

Ewan 15746

Lafoensia cameliaefolia

Tr. & Pl.

Det. J. Ewan

Ewa 15860

Vismia laurisformis

(Lam.) Choisy

det J Ewan

Ewa 16827

Davilla aff. lacunosa

Mart

det J Ewan

Ewa 16053

Marcgravia aff. macrophylla

(Willd.) Gilg

det Ewan

PLANTS OF ALASKA

Kenai Peninsula, Moose Range

July , 1939

L. J. Palmer, No.

PLANTS OF MEXICO.

COLLECTED AT SIERRA EN MEDIA, STATE OF CHIHUAHUA.

No. E. W. NELSON, Collector. Sept. 28, 1899.

PLANTS OF TEXAS

Northwestern part of Cherokee Co.

Spring 1939

H. M. Smith, No.

PLANTS OF ALASKA

Kenai Peninsula, Moose Range

July , 1939

L. J. Palmer, No.

PLANTS OF ALASKA

Kenai Peninsula, Moose Range

July , 1939

L. J. Palmer, No.

Core 1053
Podandrogyne
brachycarpa
(D.C.) Woods

H H Iltis

Core 708
Xyris jupicai L.C. Rich
Smith + Idoto

Core 999
Xyris acutifolia
(Heimerl) Malme
det. S + I

Core 1512
Xyris jupicai L.C. Rich
det S+I

PLANTS OF ALASKA

Willow Creek: branch of Susitna River, 75 miles north of Anchorage.

L. J. Palmer, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Core 377 Cogn.

Brachyotum lindenii Cogn.

1

det J J Wurdack

Core 58

Brachyotum lediifolium
(Desr.) Triana

det JJ Wurdack

Cre 1226

Panopsis sp

Core 1047

Ichthyothera scandens
Blake (?)

Core 907

Brachyotum corneum
(Bonpl.) Tr.

det J J Wurdack

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge,
Arkansas County.

No. Howard Miller

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge,
Arkansas County.

No. Howard Miller

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge,
Arkansas County.

No. Howard Miller

Dr Core:

Certainly you will be pleased to know that after so long a time, the collection of the Cinchona Project are finally in order and ready to be sent out to specialists for naming! I have put many long hours toward this end, ~~and would have completed the preparations last year except~~ would have been completed last but for the fact of my absence on a trip to Ethiopia. Now ~~now~~ I am ~~about to~~ ready to give full attention to the ~~identification~~ all the specimens have been named i.e. with the most inconsiderable quantity ~~of plants~~ for which no specialists will be available.

In the files are two of your letters which apparently were never answered. ~~In~~ Your letter of May 27, 1947 ~~you also~~ mentions specimen 1249, which has not been placed in genus. ~~You~~ The tentative identification is Sapindaceae (?). Do you still want the remainder of the material. I believe ~~we~~ there are 2 sheets here.

Appended is a list of identifications which may be of interest to you

(over)

Your letter of May 26 1949 asks
The
about further duplicates of
about your number 1221 ~~Zinowiewia~~
Zinowiewia in which Dr. Lundell ~~was~~ interested
~~to~~, would be still wanting to see the
material?

As to your question about the Orozara
no 648 I can say that your spec
was the only one collected by any
of the botanists on the Chaco project.
However the genus is known fro
South America, in fact collected
it twice in Brazil and the herbarium
here has about 10 sheets from Venezuela
Peru and elsewhere.

Appended are a list of identificat
which may be of interest to you.

Core
no

Core 907
is Brachyotum cernuum (Bonpl.) Tr. not B. lindenii Cogn.
(from Keck letter Nov. 13, 1951)

Change on label
+ in lists

Herbarium

November 6, 1951

Dr. Lyman B. Smith
Associate Curator
Division of Phanerogams
Smithsonian Institution
Washington, D. C.

Dear Dr. Smith:

In accordance with our telephone conversation, there is being sent to you a package of specimens from the Cinchona Project for naming. The list is enclosed.

Sincerely,

W. Andrew Archer
Curator

WAA/cj
Enclosure

To Lyman B. Smith for naming.

u unicate

Bromeliaceae

	St. John No.
u	20664

Monnina

	Core No.
u	524
u	717
u	979
u	1158

	Fassett No.
	25180

	Fosberg No.
	19735
	19879
	20036
	20066
u	20405
	20434
	20443
u	20843
u	22048

Fosberg & Giler
No.

u 22926a

Kyris

Fosberg
No.

u 20498

	Fosberg & Giler No.
u	22926

	Kyris
	Fosberg No.
u	20498

	Fosberg & Giler No.
u	22926e

	Xyris	Fosberg No.
u		20498

To Lyman B. Smith for naming.

u = unicate

Bromeliaceae

	St. John No.
u	20664

Monnina

	Core No.
u	524
u	717
u	979
u	1158

	Fassett NO.
u	25180

	Fosberg No.
	19735
	19879
	20036
	20066
u	20405
	20434
	20443
u	20843
u	22048

Fosberg & Giler
No.

u 22926a

Xyris

Fosberg
No.

u 20498

THE UNIVERSITY OF WISCONSIN
MADISON 6, WISCONSIN, U. S. A.

DEPARTMENT OF BOTANY
BIOLOGY BUILDING

May 31, 1950

Mr. W. Andrew Archer
Bureau of Plant Industry
Beltsville, Maryland

Read
W aa

Dear Mr. Archer:

I am sending you my collections of Callitriche from Colombia. There are two sets, one for the Institute at Bogota. I have distributed the rest of the material myself and am enclosing a record of the herbaria to which each number has gone.

Sincerely yours,

N. C. Fassett

Enc.

RECEIVED
JUN 5 1950
U.S. DEPARTMENT OF AGRICULTURE
PLANT EXPLORATION AND INTRODUCTION
ANSWERED

25918. Nat. Arb., Bogota, GH, MO

25916. Nat. Arb., Bogota, WIS, CM, NY, US, MO

25808. Nat. Arb., Bogota, GH, MO

25809. Nat. Arb., Bogota, GH, MO

15807. Nat. Arb., Bogota, GH, MO

25796. Nat. Arb., WIS, US, CM

25932. Nat. Arb., Bogota, MO, CM, GH, US, NY, WIS

25071. Nat. Arb., Bogota, MO, WIS, GH

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Dr. W. A. Archer, Plant Industry Station DATE: January 26, 1950

FROM : E. P. Killip EPC

SUBJECT: List of specialists on Colombian plants

As I promised you the other night, I am sending you a copy of the list that I prepared for Guttierrez recently. It was drawn up mainly with the view to having him and the botanists of Bogotá send material direct to the specialists rather than for me to divide it up. You may wish to discuss this with me sometime and make additions or corrections.

January 24, 1950

Specialists at U. S. N. H. to whom Colombian specimens should be sent for identification:

17. Gramineae: J. R. Swallen
18. Cyperaceae: Killip
27. Xyridaceae: L. B. Smith
30. Bromeliaceae: L. B. Smith
41. Zamaceae: Killip
46. Musaceae: L. B. Smith
47. Zingiberaceae: L. B. Smith
48. Connaceae: L. B. Smith
50. Burmanniaceae: L. B. Smith
65. Urticaceae: Killip
95a. Winteraceae: A. C. Smith
99. Myristicaceae: A. C. Smith
101. Monimiaceae: A. C. Smith
134. Leguminosae: Killip
140. Tropaeolum: Killip
168. Hippocrateaceae: A. C. Smith
213. Passiflora: Killip
216. Loasaceae: Killip
218. Begoniaceae: L. B. Smith
239. Araliaceae: A. C. Smith
246. Ericaceae: A. C. Smith
251. Myrsinaceae: ~~L. B. Smith~~ A. C. Smith
260. Buddleia: L. B. Smith
269. Cordia, Tournefortia: Killip
279. Gesneriaceae: Morton
283. Acanthaceae: Leonard
288. Caprifoliaceae: Killip
290. Valerianaceae: Killip

Ferns: C. V. Morton

January 24, 1950

Specialists, exclusive of those at U. S. N. M., to whom Colombian specimens should be sent for identification. Material should not be sent, however, without prior correspondence and permission.

9. Potamogeton: Ogden, Univ. Maine, Orono, Me.
19. Palmae: Dugand or L. H. Bailey
26. Eriocaulaceae: Moldenke, NYBG.
29. Rapateaceae: Bassett Maguire, NYBG.
45. Iridaceae: Foster, Gray Herb.
49. Marantaceae: Idrobo
54. Piperaceae: Yuncker, De Pauw, Greencastle, Indiana
64. Ficus: Dugand
66. Proteaceae: Sleumer, Tucuman
74. Aristolochiaceae: F. C. Hoehne, Inst. de Botanica, São Paulo, Brazil
77. Coccoloba: Howard, Harvard
87. Arenaria, Silene: Maguire, NYBG.
94. Menispermaceae: Moldenke, NYBG.
98. Annonaceae: R. E. Fries, Naturhistoriska Riksmuseet, Stockholm
112. Droseraceae: Steyermark
115. Crassulaceae: Clausen, Cornell
119. Hydrangea: McClintock, Cal. Acad.
123. Brunelliaceae: Cuatrecasas
124. Cunoniaceae: Cuatrecasas
130. Alchemilla: Perry, Arn. Arb.
134. Crotalaria: Senn, Ottawa, Central Experimental Farm
Lupinus: C. P. Smith, P. O. Box 102, Cupertino, California
138. Geranium: H. E. Moore, Bailey Hort., Ithaca, New York
146. Burseraceae: Swart, "De Pieterman", Schalkhaar, The Netherlands
152. Vochysiaceae: F. Stafleu, Botanisch Mus., Utrecht
156. Euphorbiaceae (part): Steyermark, Chi. Nat. Hist. Mus.
162. Anacardiaceae: Barkley, Tucuman
167. Celastraceae: Lundell, Texas State Research Foundation, Renner, Tex.
171. Icacinaceae: Howard, Gray Herb.
186. Bombacaceae: Cuatrecasas
195. Ternstroemiaceae: Kobuski, Arn. Arb.
196. Vismia: Ewan, Tulane Univ., New Orleans, Louisiana
197. Clusiaceae: Cuatrecasas
208. Violaceae: A. Fernandez
209. Flacourtiaceae: A. Fernandez
233. Myrtaceae: E. Kausel, Casilla 867, Santiago, Chile
234. Melastomataceae: Gleason, NYBG
235. Onagraceae: P. A. Munz, Rancho Santa Ana, Anaheim, Calif.
240. Umbelliferae: Mathias, U. C. L. A.
254. Sapotaceae: C. Baehni, Conservatoire et Jardin Botaniques, Genève
260. Strychnos: D. A. Krukoff, NYBG.
Spigelia: Ewan, Tulane
261. Gentianaceae: Ewan, Tulane
263. Apocynaceae: Woodson, Missouri Bot. Gard.
264. Asclepiadaceae: Woodson, Wo. B. G.
265. Convolvulaceae: O'Donell, Tucuman
266. Cuscutaceae: Yuncker, De Pauw
269. Boraginaceae: Johnston, Arn. Arb.
(except Cordia & Tournefortia)

271. Labiatae: Epling, U. C. L. A.
274. Scrophulariaceae: Pennell, Phil. Acad.
275. Bignoniaceae: Dugand
281. Lentibulariaceae: Steyermark
287. Rubiaceae: Steyermark
293a. Lobeliaceae: McVaugh, Univ. Mich.
299. Senecio, Gynoxys, Diplostephium, Espeletia: Cuatrecasas

Ewan No.	
16010	Weinmannia trianae Hieron Det. Cuatrecasas
16041	Chamissoa altissima H.B.K. Det. Killip
16390	Phyllactis rigida Pers. Det. Killip
16579	Urtica ballotaefolia Wedd. Det. Killip

Melastomataceae

Brachyotum

J. J. Wurdack
Oct. 1951

→ Drew E-289

B. lindenii Cogn. (=B. Rivetii Daug. & Cherm.)

→ Core 58, Fosberg 20825

B. ledifolium (Desr.) Triana

→ Fosberg 22025

B. strigosum (Linn. fi) Triana

→ Core 377

B. lindenii Cogn.

Core 907

B. cernuum (Bonpl.) Triana

Fosberg & Giler 22648

B. jamesonii Triana

Entered in hum list
Slips made for lists
Set I accessioned
Names entered on botfolz

Dr. Moldenke

Verbenaceae, Ericaulaceae

Dr. Gleason

Melastom.

Mr. Monachino

Sapotaceae, Apocynaceae

Purpurella

Dr. Maguire

~~Core 399, Core 939~~

Guttiferae, Rapateaceae

→ Fosberg & Villareal 20580

→ Fosberg 20265

→ Core 399

→ Core 939

Mr. Wurdack

Polygalaceae, Aquifoliaceae

Dr. Rogers

Fungi

Sort out dupes

of Cardboard

Project

by Collection

Take out mad

ones for Borgata?

Apium dissectum (Benth.) Drude
"Apium dissectum var. asperum Wedd." fide Wolff
"Apium dissectum var. ciliatum Wedd." fide Wolff
"Apium dissectum var. typicum Wedd." fide Wolff
Apium glaucescens Kunth
Apium Kalbreyeri Wolff
Apium lingula (Wedd.) Drude
Apium montanum Kunth
Apium montanum subsp. ranunculifolium (Kunth) Drude
Apium ranunculifolium Kunth
Apium scabrum Wolff
Apium ternatum (Willd.) Thell.
Apium ternatum var. genuinum Wolff
Apium ternatum var. genuinum subvar. angustisectum Wolff
Apium ternatum var. ranunculifolium (Kunth) Thell.
Apium Weberbaueri Wolff

Laserpitium ternatum Willd.

Ligusticum peucedanoides var. longifolium Presl
Ligusticum peucedanoides var. tenuifolium Presl
Ligusticum ternatum Wills.

Niphogeton andicola Schlecht.
Niphogeton ciliatum Rose ex Pittier
Niphogeton dissecta (Benth.) F. Macbr.
Niphogeton dissecta var. aspera (Wedd.) F. Macbr.
Niphogeton dissecta var. ciliata (Wedd.) F. Macbr.
Niphogeton glaucescens (Kunth) F. Macbr.
Niphogeton Jahnii Rose ex Pittier
Niphogeton magna F. Macbr.
Niphogeton scabra (Wolff) F. Macbr.
Niphogeton Weberbaueri (Wolff) F. Macbr.

Oreosciadium dissectum var. asperum Wedd.
Oreosciadium dissectum var. ciliatum Wedd.
Oreosciadium dissectum var. "glaberrimum Wedd."
Oreosciadium glaucescens Hieron.
Oreosciadium lingula Wedd.
Oreosciadium lingula subvar. pusilla Wedd.
Oreosciadium montanum (Kunth) Wedd.
Oreosciadium montanum var. ranunculifolium (Kunth) Wedd.
Oreosciadium montanum var. ranunculifolium subvar. glaucescens (Kunth) Wedd.
Oreosciadium scabrum Wolff

Petroselinum dissectum Benth.

1. Conclusion

Plant named by specialist

Entered — num. Card ✓
List sent to collector
" " " county organ
names entered on labels
Specimens — accession no. ——
Duplicates sent to

DDT for

pamphlets arrange

Returned to Beltsville, May, 1951 by Joseph Ewan.

Full names for labels added to mem. list Oct 1951 ee

Ewan 16960 unicate
Ewan 16969 unicate
Ewan 15741 Type of Clusia chusqueae
H. L. Grant 10519
Grant & Fosberg 9342
Fassett 25432
Fosberg 19851 Vismia
Ewan 15860 Vismia
Grant & Drew 10653 Vismia
St. John 20588 Vismia
St. John 20589 Vismia
St. John 20540 Vismia

Mr. Edwin

TULANE UNIVERSITY
College of Arts and Sciences
NEW ORLEANS 18

Department of Botany

RECEIVED
MAY 28 1951
U.S. DEPARTMENT OF AGRICULTURE
PLANT EXPLORATION AND INTRODUCTION

25 May 1951

Dr. W. A. Archer
Plant Industry Station
Beltsville, Md.

Dear Dr. Archer:

I'm returning certain miscellaneous collections at this time, as per the list herewith. I am aware that I still have a large collection of ferns at hand for naming, and a few miscellaneous numbers for special study but the ferns will take a good deal of study, and I'm anxious to get these odds and ends returned for the present. You will note that a type of Clusia chusqueae, to be described in Natural History Miscellanea (Chicago Academy of Sciences), is in this lot.

Very sincerely,
Joseph Ewan
Joseph Ewan
Asst. Prof. of Botany

Enclosed

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Dr. A.C.Smith, National Herbarium, Smithsonian Institution.

DATE: Oct. 10, 1951

FROM : W. Andrew Archer, National Arboretum, Plant Industry Station, Beltsville, Md.

SUBJECT: Naming of specimens from the Cinchona Project.

A few groups of plants from the Cinchona Project are ready for naming by specialists. Those concerned are Drs. L.B.Smith, E. C. Leonard, Ramón Ferreyra and Jeeús Idrobo.

For convenience, lists of the plants are enclosed. The carbon may be used for return when the determinations are completed.

All the specimens may be retained there except for the unicates, which I regret to note are of high incidence.

CINCHONA PROJECT

Dr. E. C. Leonard for naming

Acanthaceae u = unicate

E.L.Core
No.

591
u 825
1200
1322
1324
1377
u 1482
1501
u 1558
1619

W.B.Drew
No.

u 379

E.L.Ekvinger
No.

u 471

J.E.Ewan
No.

15622
15628
15629
15732

J.M. Ewan
No.

16464

16501

16691

16785

F.H. Fosberg
No.

19131

19492

19791

u 19941

20115

20160

20386

u 20901

21029

21113

21244

21438

21445

u 21733

21809

21872

22126

22428

22670

F.H.Fosberg
No.

22715

u 23158

x 23212

J.S.Granger et al
No.

10

M.L.Grant
No.

u 9011

9124

9167

u 9319

9326

9341

9343

9439

9647
9811
10013

10278

10363

10388

10431

10525

10706

10764

M.L.Grant
No.

10731

10900

11000

E.L.Little
No.

7930

8030

M.Ownbey
No.

2712

Dr. Ramon Ferreyra

Compositae

J. A. Ewan No.

16395

16461

F. R. Fosberg No.

21179

CINCHONA PROJECT

Dr. Ramon Ferreyra for naming

Monnina

E.L.Core
No.

638

944

1608

J.A.Ewan
No.

15710

N.C.Fassett
No.

25157

25701

F.R.Fosberg
No.

21220

21743

22326

22547

22623

M.L.Grant
No.

9006

9082

10269

J.S.Granger
No.

8

E.L.Little
No.

7229

7678

8684

9233

M.Owenbey
No.

2603

H.St.John
No.

20518

20743

CINCHONA PROJECT

TO Jesus Idrobo for naming

M.L.Grant
No.

10546

Marantaceae

E.L.Core
No.

632

J.Ewan
No.

16042

F.R.Fosberg
No.

u 19407

20152

Dr. L. B. Smith

Xyridaceae

B. L. Core No.

999

1512

U 7088

F. R. Fosberg No.

19109

19172

20855

21770

22030

H. St. John No.

20606

Bromeliaceae

W. B. Drew No.

U 26

Herbarium October 8, 1951

Dr. José Cuatrecasas
Chicago Museum of Natural History
Chicago, Illinois

Dear José:

The Brunelliaceae and Compositae which you selected for naming were shipped several days ago by prepaid express.

Lists (with 1 carbon) of the collectors and their numbers are enclosed for your convenience. If you desire the identifications may be written on the sheets; the carbon to be returned to us.

Unfortunately there are a number of unicates (all are mounted). We would like to have these returned at your convenience.

Sincerely,

W. Andrew Archer
Curator

WAA/cj
Enclosures

Oct 7 1951

Cinchona Project

Compositae to Dr. José Cuatrecasas for naming

u = unicate

E.L.Core No.
u 3
u 25
u 43
u 57
215
220a
222
272f
375
380
391
u 392
u 396
395
406
454
u 455
u 544
u 577
624
976
980
993
1467
1637

W.B.Drew No.	
u	75
u	81
u	81a
u	90
u	98
u	117
	143
	151
u	211
u	219
u	255
	278
u	306
u	307
u	308
u	321
	420
u	445
	453
	463
	478
	485
u	499

J.E.Ewan
No.

15649

15982

15983

15984

15985

15986

15990

15999

16009

16089

16094

16096

16097

16099

16135

16212

16287

16288

16303

16323

16325

16361

16398

u 16403

16405

16407

16411

16427

16429

16430

16431

16432

16441

16442

16444

16445

16449

16457

16460

16536

16539

u 16629

16803

16807

16902

16908

16910

F.R.Fosberg
No.

19115

19179

19206

19216

19667

19861

19972

20111

20203

20210

u 20213

20253

20263

20578

20597

20671

20674

20676

20677

20679

20700

u 20734

20786

20791

20795

20803

20826

u 20850

20863

20912

20971

21166

21188

21351

u 21363

21364

21460

u 21603(3 sheets)

21699

21709

21879

21903

22018a

22266

22267

22268

u 22273

22284

22294

22298

22325

22338

22345

22561

22624

22629

22632

22650

22847

22885

22887

u 22946

M.L.Grant No.

9229

9243

9244

9414

9423

9483

9484

9485

9526

10632

u 10644

10791

10848

u 10854

10862

u 10863

10864

u 10865

u 10872

10949

u 10962

10965

E.L.Little
No.

8501

H.St.John
No.

20535

20605

20607

20675

20736

20741

20746

20751

20753

20759

20767

20779

20787

20798

20799

20895

20896

20898

Herbarium

December 4, 1951

Dr. A. C. Smith, Curator
Division of Phanerogams
Smithsonian Institution
Washington 25, D. C.

Dear Dr. Smith:

The sets of specimens from the Cinchona Project are now ready for naming. Those families in which you expressed interest are being delivered in two cardboard boxes.

Lists of the collection numbers are enclosed for your convenience.

Very sincerely,

W. Andrew Archer
Curator

WAA/cj

CINCHONA PROJECT

Ericaceae for naming

To Dr. A. C. Smith

	Core No.
u	1
u	18
u	33
u	34
u	35
	49
	120b
	224
	239
	241
	263
	315
	362
	383
	387
	390
	426
	461
	462
	546
	547
	547a
	687

694

740

754

757

765

782

783

895

904

953

972

977

1013

1109

1110

1208

1209

1266

1267

1268

1329

1382

1455

1459

1478

1580

1583

	Drew No.
"	63
"	64
"	172
	174
	176
	177
"	222
	223
	336
"	374
	528

	Swan No.
	15615
"	15703
"	15706
	15747
	15872
"	15991
	16046
	16091
	16229
	16248
"	16250
	16477

u	16541
	16583
	16623

Fassett No.
25416
25609
25696
25699
25702
25704
25706
u 25717
u 25721

Foeberg No.
u 19063
19064
19070
19092
19093
19162
19175
19193
19195
u 19207
19214

19567
19629
19674
19690
19706
19793
19908
19954
19957
20200
20211
20235
20255
20269
20273
20313
20317
20683
20798
20800
20812
20816
20852
20927
20929
20930
20935

20937
20940
u 20942
u 20961
u 20966
20969
u 21017
21020
21118
21165
21170
u 21172
21174
21217
21265
21348
u 21456
21521
21622
21626
21627
21697
~~21612~~
21701
21712
u 21715
21721
21887

21975

21977

21980

22011

22020

22213

22237

22238

22282

22283

22316

22327

22342

22365

22366

22372

22380

22462

22509

22557

22676

22678

22681

22682

22688

22690

22693

u	22697
	22726
u	22750
	22751
	22755
	22784
	22810
	22811
	22834
	22835
	22837
u	22839
u	22840
	22841
	22844
u	22868
u	22871
	23070
	23079
	23120

Grant No.
9048
9083
9098
9180
9187

u 9188

u 9245

u 9248

u 9252

9404

9406

9415

9416

9417

9428

9429

u 9431

9600

9643

9650

9708

9750

9829

9888

10117

10339

u 10639

u 10643

u 10679

10796

10797

u 10843

10849

u	10855
	10856
	10860
u	10866
	10940
	10941
	10952
u	10959
u	10964

Hurtado No.	
u	19

Little No.	
	7026
	7027
	7030
	7034
	7045
	7142
	7143
	7189
	7190
	7329
u	7397
u	7551

7958

8136

8141

8649

8656

8680

u 8844m

9206

9207

St. John No.
20658
20670
20691
20711
20712
20740
20781
20880

CINCHONA PROJECT

Monimiaceae for naming

To Dr. A. C. Smith

Drew
No.

779

Evinger
No.

u 497

Ewan
No.

15624

15861

16016

16498

16704

16852

Fassett
No.

25281

Fosberg
No.

u 19381

19513

19528

19534

19648

19799

19807

u 19814

20026

20167

20198

20391

20392

20428

u 20463

20486

21111

u 21224

21307

21827

22085

Granger No.

u s/n

Grant No.

u 10167

10213

Little No.
7134
7271
8042
8262
8450
8547
8692
8771
8772
8857

St. John No.
20533
20597

CINCHONA PROJECT

To Dr. A. C. Smith for naming

Hippocrataceae

Fassett
No.

u 25136

Fosberg
No.

21436

21817

Little
No.

9535

Myristicaceae

Little
No.

8315

8319

8546

9542

9573

9666

9672

Herbarium

December 4, 1951

Dr. C. V. Morton
Smithsonian Institution
Washington 25, D. C.

Dear Dr. Morton:

In accordance with our verbal agreement sometime ago, I have gotten together the ferns and club mosses of the Cinchona Project.

The specimens, packed in three cardboard boxes, are being delivered to the Smithsonian.

Enclosed is a list of the collectors numbers for your convenience.

Sincerely,

W. Andrew Archer
Curator

WAA/cj

CINCHONA PROJECT - COLOMBIA MOSTLY

Ferns to Dr. C. V. Morton for naming

	Core No.
u	83
u	223
	240
	329
u	401
u	451
	574
	634
	671
	806
	892
u	1271
	1317
	1345
u	1346
u	1347
	1365
	1369
u	1518
	1566
	1600

Ewan No.
16865

Fassett No.
25051
25153
25184
25259
25266
25354
" 25356
25360
" 25361
25420
25509
25518
25549
25574
25728
25931
25965

Fosberg No.
19095
19105
19112a

19113
" 19119
" 19120
" 19145
19165
" 19187
19200
19233
19270
" 19287
19307
19359
19360
19366
" 19367
" 19368
19369
" 19400
" 19404
" 19405
19406
19441
19444
19444a
19455
19459
" 19460

a 19467
19470
19472
19475
19509
19510
19539
19548
19550
19551
19559
19562
19563
19566
19576
19617a
19637
19688
19694
19716
19722
19723
19751
u 19752
19792
19806
19816
u 19838

19840

19859

19862

u 19863

u 19866

19867

19868

19892

19899

u 19900

19907

19938

19940

19948

19949

19950

19961

19971

19973

19975

19976

20082

20114

20117

20118

u 20125

20126

20147

20209

20239

20281

20282

20283

" 20284

" 20285

20306

20307

20342

20344

20353

20359

" 20360

20364

20365

20382

20398

20415

20594

20634

20641

20642

20660

20661

20702

20709

20762

" 20764

20771

" 20773

" 20789

20809

20824

20857

20861

20866

" 20886

20919

20943

20954

20960

20962

20963

20964

20970

21062

21163

21245

21266

" 21267

21268

21269

21270

21270a

21360
21449
u 21488
21563
21618
21644
21671
21686
21749
u 21919
22022
22031
u 22063
22161
22181
22188
22199
22201
22202
22259
22261
22299
22300
22302
u 22303
22304
u 22305

22353

22421

22579

22580

" 22582

" 22583

" 22593

22594

22597

" 22660

22726

22778

22779

22781

22782

22799

22804

22806

22812

22874

" 22960

22963

" 23219

23220

	Giler No.
	29
	38
u	48
	48a
	49
	59

	Granger No.
	18

	Grant No.
u	9002
	9003
	9004
	9005
	9029
	9039
	9042
	9050
	9053
u	9062
u	9063
	9065
	9066
	9070
u	9072

u 9073
9086
u 9087
9089
9094
u 9095
9119
9123
9126
u 9159
9160
9182
9183
9227
9228
9280
9283
u 9287
9292
9293
u 9296
u 9297
9301
9308
9349
9377
u 9383
u 9390

9391
" 9394
9399
9411
" 9412
9413
9427
9446
9447
9470
" 9471
9495
9508
" 9517
9520
" 9530
" 9531
9532
" 9533
" 9537
9555
9572
9580
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9609
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u 9634
9642
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9702
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u 9720
u 9739
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u 9762
9771
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9783
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9801
9803
9807
u 9810

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u 9817

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u 9857

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u 9860

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u 9867

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u 9878

u 9879

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u 9892

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u 9924

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10101
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10104
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10165
10200
10201
10209
10210

10211

10215

10233

10234

10236

u 10237

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u 10249

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u 10284

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10299

u 10304

10308

u 10309

10316

" 10318
" 10320
10322
10323
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10341
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10354
10381
10416
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" 10432
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" 10434
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" 10436
10447
" 10449
10450
" 10453

u 10455

10457

u 10463

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10516

u 10517

u 10518

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u 10596

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u 10663

u 10671

10719

10728

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" 10735
10736
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" 10741
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10757
10765
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10768
10771
10773
10786
10798
10799
10800
10802
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10809
10810
10812
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10838

u 10840

10879

10893

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10902

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10915

u 10943

10945

u 10946

10947

10948

u 10972

10974

10975

10978

u 10982

10992

11009

Hodge No.
6087
6090

R. Hurtado No.
30
31

McDermott No.
5

Ownbey No.
2608
2609
2610
2612
2614
2615
2615a
2616
2616
2616a
2616b
2619
2620
2621
2625

2627
2638
2639
2640
2641
2706
2707
u 2707a
2721
2732

St. John No.
20526
20540
20772
20844

CINCHONA PROJECT - COLOMBIA

Lycopodium

To Dr. C. V. Morton for naming

Core No.
21
284
333
381
388
430
" 451
663
709
" 738
798
1005
1064
1104
1133
1212
1379

Ewan No.
15737
15778
16084
16095

16243

16244

16245

16284

16293

16294

16295

16296

16304

16334

16358

16396

16435

16443

16521

16526

16529

16540

16585

16586

16606

16626

16826

16887

16897

	Tassett No.
	25029
	25058
u	25073
u	25117
	25421
u	25615
a	25626
	25637
	25638
	25646
	25649
	25684
	25725
	25805
	25852
	25855
	25856
	25859
	25876
	25886
	25902
	25903
	25915
	25921
	25924
	25984

26016

Fosberg No.
19164
19218
19219
" 19263
" 19617
" 19900
20232
20319
20394
20437
20609
" 20790
20895
" 20900
21167
" 21315
" 21453
" 21541
21545
21567
21693
21703
" 22021
22524

	22780
	22800
	22842
u	23048
	23104

Grant No.
u 9121
u 9156
u 9219
9250
9409
9418
9419
9420
9436
u 9482
9560
9928
10250
10251
u 10301
u 10468
10598
u 10616
10749
u 10753
10795

u	10839
	10847
	10967

	Little No.
u	7012
u	7013
	7438
	7447
	7818
	8160
	8161
	8162
	8163
	8178
	8179
	8183
	8506
	9173
	9174
	9188
	9239
	9325
	9359
	9360
u	9361
u	9362

9373

9449

St. John No.

20774

20856

20891

20892

20896

Sent Jan 9 1952

CINCHONA PROJECT
Gramineae for naming
To J. R. Swallen

Core No.
10
u 2322
u 23
u 24
u 27
82
u 124
171
173
226
u 400
408
u 477
u 530
627
690
713
751
794
800
u 801
u 805

815

u 817

853

875

879

894

u 1017 (2 sheets)

1021

1039

u 1116

1132

u 1144

1145

u 1146

1205

1231

1272

1277

1278

1279

1287

1343

1446

1470

1514

Fassett No.
25022
25028
25041
25046
25064
25066
25097
25098
25099
25115
25122
25159
25192
25273
25534
25556
25569
25575
25585
25602
25603
25613
26001

Fosberg No.	
19044	
19045	
19086	
19240	
19243	
19245	
19280	
19318	
19325	
19326	
"	19398
19403	
19499	
19504	
19508	
19512	
19519	
19537	
"	19543
19568	
19577	
19581	
19589	
19590	
19591	

19635

19649

19737

19777

19817

19831

20109

20182

20183

20370

20532

20648

20651

20676

20727

20729

20743

20745

u 20747

u 20749

u 20750

20756

u 20856

20864

20867

20905

u 20957 (4 sheets)

21027

21229

21537

21575

u 21741 (2 sheets)

21764

21767

21859

21990

22051

22112

22134

22135

22136

22162

22168

22169

22170

u 22171

u 22172

22175

22184

u 22190

22191

22194

22198

22200

22208

22276

22320

22379

22383

22384

22386

22426

22622

u 22630

22633

u 22635

22652

u 22679

22746

22747

22820

22984

23013

23144

u 23149

23182

23197

Grant No.	
9079	
9437	
9728	
9845	
a	9887
9973	
10162	
10353	
10442	
10443	
10543	
10549	
10630	
10641	
a	10666
a	10667
a	10668
a	10724
10727	
10772	
a	10827
10868	
10869	
10898	
10942	

Little No.
8493
8556
8711

St. John No.
20703
20819

(Copia para F.R. Fosberg)

Plantas de N. C. Fasset, recibidas en el H.N.C. el 3, Junio, 1946.

22277	25364	25515	25794
22278	25405	25554	25800
25023	25406	25559	25819
25047	25435	25587	25844
25063	25453	25604	25861
25072	25463	25611	25881
25079	25464	25612	25887
25087	25487	25619	25891
25217	25493	25651	25892
25224	25494	25652	25917
25253	25495	25664	25936
25262	24497	25666	25950
25275	25499	25671	25966
25294	25500	25679	25968
25304	25502	25686	25974
25306	25504	25698	25976
25307	25505	25737	25979
25308	25507	25738	25983
25353	25508	25757	26000
25358	25514	25758	26010

Plantas recibidas en el H. N. C. el dia 8, Junio, 1946.

Colector: N. C. Fassett.

25030	25492	25629	25884
25032	25496	25631	25929
25033	25557	25633	25947
25068	25600	25756	26020
25271	25601	25842	26026
25374	25628	25843	

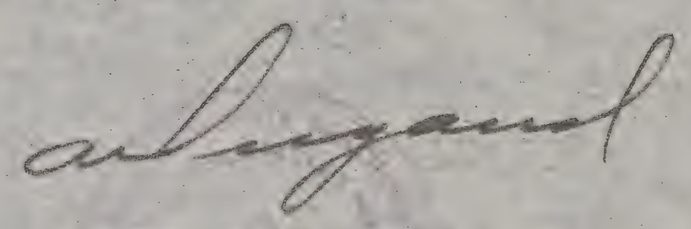
Colector: F. R. Fosberg.

19355	19711	19889	20297
19390	19776	19910	20304
19579	19795	19933	
19582	19823	19984	
19646	19880	20020	

Colector: Martin L. Grant.

9237	9925	10414	10814
9238	10021	10554	10903
9424	10028	10620	10925
9457	10205	10720	
9525	10307	10732	

(Copia para F.R. Fosberg)



June 13, 1946

Dr. A. Dugand
Instituto de Ciencias Naturales
Apartado Postal No. 2535
Bogota, Colombia

Dear Doctor Dugand:

Your letter of June 13, addressed to Dr. F. R. Fosberg, comes to my desk since Doctor Fosberg at present is on a special assignment in the South Pacific for another government agency.

I am turning the record over to Doctor Blake, who is in charge of all the botanical work for our Division and the National Arboretum temporarily and he will be able to see that the records are kept complete.

Personally, I am sorry that we have not been able to send you more things more swiftly, but our personnel problems are very real and very complicated.

With best personal regards to you and your colleagues, I am

Very sincerely yours,

B. Y. Morrison
Principal Horticulturist in Charge

BYM:MMB

Dr. Blake has Fosberg letter and a copy of this letter. B.Y.M.

	Lpms here	Labels ready (at least 1 set)				
Camp	O					He to label & send back to us
Core	✓	pt ?				
Drew	✓	✓				
Ensinger	✓	✓				Core 31
Evan	✓	pt				Core 5-9, 60, 61, 62
Fassett	✓	✓				Maps to be inserted Core 182, 199
Fosberg	✓	pt				
Grant	✓	✓				Core 177, 178
Hermann	✓	✓				all ident. ✓ Core 97
Hodge	✓	✓				Core 197
Kernan	✓	mostly				Core 35, 186
Little	✓?					here label Core 67, 187, 211, 249-251
McComb	✓	mostly				Core 1 & 2, 186
Quinby	✓	✓				Core 201
Prescott	✓	✓				Core 186
St John	✓					Data here Core 4-5, 186
Steere	1 batch?					Core 31
Steyermark	O					Will send Cinchona He to label & send sets
Wiggins	O					

Stewart, Francis, *5th earl of Bothwell*

see

Bothwell, Francis Stewart Hepburn, *5th earl of, d.* 1624.

LIBRARY OF CONGRESS REFERENCE

Users of depository catalogs should note that references may be to Library of Congress secondary entries which do not appear as headings in depository catalogs.

X 46–12136

[1]

Hepburn, Francis Stewart, *5th earl of Bothwell*

see

Bothwell, Francis Stewart Hepburn, *5th earl of, d.* 1624.

LIBRARY OF CONGRESS REFERENCE

Users of depository catalogs should note that references may be to Library of Congress secondary entries which do not appear as headings in depository catalogs.

X 46–12137

[1]

Naval air transport service

Status of the various collections made during the Cinchona investigations in S. Amer. (Forberg, to March 1946)

Camp. All spms. are with him; he to label & send back to us.

Core. All spms. are with him; he to label & send back to us.
"Rest 1/2 case in Case 252 in Cord's" (24/6/46) all or most are now back, but not all labelled. (Feb '47)

Drew. ← (Nicht Stated) All spms. are with him; he to label & send back to us.

Case 31 Evinger (ca. 175 spms). (was with FEA last — might be transf. to Commerce) All spms. are with us & are labelled; a set is to be sorted out for Hodge. ~~No~~ itinerary; ~~should if any be at F.E.A.~~ data might be in this rept. One set has been deposited in Lima by Hodge.

Case 59, 60, 61, 62 Evran. All spms. with us. Labels are all printed; he has supplied an incomplete typescript for labels, and I (/365/) have asked him to complete it and to prepare an itinerary.

Case 199, 182 Fassett. All spms. with us and all labelled; the small locality maps to go with the spms. are all printed and marked, but not all inserted. Itinerary is needed.

Forbes. All spms with us.
(Thesis Liberty is to be furnished by Mus. Y. will be ± ½ of whole) ~~If~~ all p[illegible] labels ne to get proof read
nos. Yale Itinerary finished + left with me to be copied.

Case 177, 178 Grant. All spms. are labeled and we have full set. Itinerary is needed and also inspection of his notebooks to get his collect. nos. (to distinguish non-bot. spms. which are in same series of nos.) We have all his Rubiaceae, and the Bogotá set of everything.

Case 97 Hermann. All spms. with us, all labeled, all identified.

Case 197 Hodge. All spms. with us, and all labeled. We have no notebooks from which to prepare itinerary. (will be back at Mass. State Coll at Amherst at end of summer
Our set in case 197; (remainder in 2 bxs ~~ready to ship to here~~ these were sent 4 Oct. 1946 (in motor veh no.)) A set has been deposited at Lima.

Kernan (forester; ca. 160 nos.) All spms. here, and mostly labeled. Amer. For. Assoc., D.C.
Case 186 ✓ 35 ✓ (labels of label forms not yet printed, but proof has been read

✓ Little. All spms. here; forms are printed I will label them. We have no itinerary. He has extracted set for Rubiaceae (except Cases 67, 187, 211, 249, 250, 251 ✓).

McComb (forester; ca. 93 nos). All spms. here, mostly labeled; 1 notebook is missing (the data may be in his last rept. to F.S.Q.) Case 186 ✓ 182 ✓ So. Ill. State Coll. Herein case 182 (H 110–116) not labeled.

Case 201 ✓ Dunbery. (probably ca. 200 nos; Rewards (set)) All spms. with us; we have 1 set of typed labels, but the localities need enlargement
Do we have this as published?
No: but have his rept.
(Prof. very little @ Cinchona)

case 186 ✓ Prescott (now at Albion College). (ca. 50 spms). All here & labeled.

✓ St. John. All spms here, and data, ~~[illegible]~~ all labels ~~forms~~ have ~~gone to~~ now com back from printer. (7/14/47) 9 Itinerary needed; not likely to be provided by him

Case 185, 186v

Case 31

Steere. We have no spms., except 1 batch without data [nor. write on sheets, no labels, no data] that may really belong to Bogotá; probably many are at U.S.N.H. (sent to U.S.N.H.). No notes here. (all of his Peru. here

Steyermark. We have nothing; he will send set of Cinchona and relatives; the remainder are doubtful.

Wiggins. We have nothing. He is to label and send us a set, and to send all material of Cinchona &c. before distributing into sets.

We have all repts. that were submitted to F.E.S. (now in 2 metal filing cases in attic March 1946) in U.S.C.C. Most of these have some indication of itinerary; collecting nos. were included by the people in Colombia, not by any others.)
There are also about 1½ cases of spms. from miscellaneous people, mostly Cinchonas and aff.; about 1/3 labeled, 1/3 with good data but unlabeled, 1/3 with poor or no data.

see 186

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
WASHINGTON, D. C.

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300

Identifications to send
Collectors
Does not include
recent
lots

Drew-70

Tessaria integrifolia R.&P.

det. J. Cuatrecasas

Drew E-289

Brachystum lindenii Cogn.

det J J. Wurdack

Drew-77, 104 (Karst.) Harms

Passiflora cumbalensis 1

det Killip

Drew 66 Pers.

Passiflora manicata (Juss.)

det Killip

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge, Arkansas County.

No.

Howard Miller

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Drew 508
Passiflora mixta L. f.

det Killip

Drew 107
Passiflora andina Killip

det Killip

Drew 611 DC.
Passiflora adenopoda 1

det Killip

Drew 265 HBK.
Passiflora tarminifolia 1

det Killip

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

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Big Bend National Park, Chisos Mountains, Brewster County

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PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

H. St John 20606

Xyris acutifolia
(Heimerl) Malme

det St I

Drew 646 Aufl.
Xiphidium caeruleum,

det Killip

Grant 10302
Passiflora cuneata Willd

det Killip

St. John 20584
Passiflora vitifolia HBK.

det Killip

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge,
Arkansas County.

No. Howard Miller

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Ecuador Comps – Cinchona Proj
det. S. F. Blake

Brow no	
164	Senecio vaccinioides (HBK.) Sch. Bip.
187	Diplostephium lavandulifolium HBK.
203	Culcitium ovatum (Schl.) Blake
204	Senecio ericaefolius Benth.
230	Chuquiraga jussieui J. F. Gmel.
242	Culcitium adscendens Benth.
254	Loricaria thuyoides (Lam.) Sch. Bip.
309	Baccharis sp.
415	Senecio formosus HBK.
418	Hypochaeris (perhaps abnormal H. glabra L.)
419	Erigeron uliginosum Benth.
421	Diplostephium antisanense Hieron.
422	Baccharis macrantha HBK. (?)
424	Diplostephium pleistogynum Blake
435	Gnaphalium antennarioides DC.
437	Senecio arbutifolius HBK

Drew

Drew

Grant 9446 Wedd.
Pilea dauciodora (R.&P.)

det Killip

Grant & Fosberg 9205
Passiflora adulterina L.f.
1

det Killip

~~Grant & Fosberg 9346~~
9053

Weinmannia myrtifolia
Cuatr.?

det Cuatrecasas

Grant 10794.1
Orthosanthus chimborazensis

det. Killip

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

M. L. Grant 10519

Purdieanthus pulcher (Hook.) Gilg

Det. J. Ewan

Grant + Fosberg 9346

Pilea imparifolia Wedd.

det Killip

M. L. Grant & N. B. Drew 10653

Visnia lauriformis (Lam.) Choisy

forma mandurr (Hieron.) Ewan

Det. J. Ewan

M. L. Grant & Fosberg 9342

Purdieanthus pulcher (Hook.) Gilg

Det. J. Ewan

UNITED STATES NATIONAL HERBARIUM.

PLANTS COLLECTED IN CHIAPAS, MEXICO.

Along road between Teneapa and Yajalon, altitude 3000-5000 feet.

No. E. W. NELSON, Collector. Oct. 13, 1895.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF JAMAICA

Between Kingston and Gregory Park, along the railroad; sea level

No. WILLIAM R. MAXON, ELLSWORTH P. KILLIP } Collectors February 22, 1920

UNITED STATES NATIONAL HERBARIUM.

PLANTS COLLECTED IN CHIAPAS, MEXICO.

Along road between Teneapa and Yajalon, altitude 3000-5000 feet.

No. E. W. NELSON, Collector. Oct. 13, 1895.

Fosberg 22030

Xyris acutifolia
(Heimerl) Malme

det S+I

Grant 9151

Pilea imparifolia Wedd.

det Killip

Fosberg 21770

X yris jupicai ~~L.C.Rich~~
L.C. Rich

det S+I

Eiler 14 Pers.

Passiflora manicata (Juss.)

det Killip

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge,
Arkansas County.

No. Howard Miller

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge,
Arkansas County.

No. Howard Miller

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Fosberg 19109

Xyris macrocephala Vahl

det S + I

Fosberg 20855

Xyris acutifolia
(Heimerl.) Malme

det S + I

Fosberg 20825

Brachyotum lediifolium
(Desr.) Triana

det J S Wurdack

Fosberg 19172

Xyris acutifolia
(Heimerl) Malme

det S + I

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge, Arkansas County.

No. Howard Miller

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Fosberg 23168

Phenax hirtus (Sw.) Wedd.

det Killip

Fosberg 22025

Brachyotum strigosum
(L. f.) Tr.

det J J Wurdack

Fosberg + Eiler 22943

Passiflora rubra L.

det Killip

Fosberg 22648

Brachyotum jamesonii Tr.

det J. J. Wurdack

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge, Arkansas County.

No. Howard Miller

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF ARKANSAS

Big Island Chute Farm, White River Refuge, Arkansas County.

No. Howard Miller

Fosberg + Prieto 22698

Pilea jamesoniana Wedd.

det Killip

Fosberg + Giler 22987

Scoparia dulcis L.

det Killip

Fosberg 22114

Heliotropium indicum L.

det Killip

Fosberg + Giler 22621

Phanax hirtus (Sw.) Wedd.

det Killip

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Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

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Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Fosberg 21624
Tournefortia bicolor Sw.

det Killip

Fosberg 22018
Passiflora micrantha Killip ?

det Killip

Fosberg & Core 21509
Pilea imparifolia Wedd.

det Killip

Fosberg 21609
Cordia riparia HBK

det Killip

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Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Fosberg 21437 (cons. lat.)
Tournefortia volubilis L.
1

det Killip

Fosberg + Core 21581
Asatia verbascifolia HBK.

det Killip

Fosberg 20630
D.C.
Borreria anthospermoides
1

det Killip

Fosberg 21425
Murr.
Heliotropium angiospermum
1

det Killip

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(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

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Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Fosberg 20335

H.B.K.

Weinmannia balbisiana

1

det Cuatrecasas

Fosberg 20499

Aubl.

Tonina fluviatilis

det Killip

Fosberg 20318

Weinmannia pubescens HBK.

det Cuatrecasas

Fosberg 20390

Cordia riparia HBK

det Killip

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Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Fosberg 19763
Cordia riparia H B K.

det Killip

Fosberg 20230 Pl. + L.
Oreopanax mutisianum
1

det Cuatrecasas

Fosberg 19339
Heliotropium angiospermum Murr.

det Killip

Fosberg 19729 H B K.
Tournefortia scabrida
1

det E. P. Killip

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Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

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(det. C. H. Muller)

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E. G. Marsh, No.

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Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Fosberg 22431

Tournefortia microcalyx
(R.+P.) Killip

det Killip

Fosberg 19229 HBK.

Cordia lanceolata (Desv.) 1

det Killip

Fosberg 21146

Passiflora cumbalensis
(Karst.) Harms

det Killip

Fosberg 19142

Tournefortia scabrida HBK.

det Killip

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

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Big Bend National Park, Chisos Mountains, Brewster County

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Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Fosberg 20618

Lippia hirsuta L.

det Killip

Fosberg 20148

Weigeltia schlimii Meg

Fosberg 22003

Cordia lanceolata HBK.

det Killip

Fosberg + Biler 22948

Lagunoa nitida R. + P.

det Killip

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Ewan 16010

Hieron.

Weinmannia trianae 1

det Cuatrecasas

Sent to Ewan Oct 30

1 ribbon
3 carbons

Fosberg 22114

Heliotropium indicum L.

det Killip

Ewan 16041

HBK.

Chamissoa altissima

det Killip

Kernan 160

Tr. + Pl.

Passiflora schlimiana 1
(very rare)

det Killip

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

St John 20833

Podandryne coccinea
(Benth.) Woods

~~HH~~
HH Iltis

Ewan 16390

Phyllactis rigida Pers.

det Killip

Ewan 13191 Colo+NM

allium textile
Nels. et Macbr.

Enter in num list

Send to E. (he has)

Ewan 16579

Urtica ballotaefolia Wedd.

det Killip

PLANTS OF ALASKA

Willow Creek: branch of Susitna River, 75 miles north of Anchorage.

L. J. Palmer, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

PLANTS OF TEXAS

College Station

D. C. Bain, No.

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

DEPT. SANTANDER, COLOMBIA, S.A.

Lehmanniella splendus (Hook.) Gilg
det. J. Swan, 1946

Flowers scarlet
Dwarf forest and shrub paramo,
Cerro del Paramo, Cerro de Armas

Altitude 6200 ft.

Region about Landazuri, 70 km. N. of Velez.

N. C. Fassett. July 2, 1944.

No. 25432

Determined by

COLOMBIAN CINCHONA MISSION

W D Drew E-447
= atenasteinia rubigena
(Reichb. f) Schltr.
det Correll
1 spec in N arb.

Fassett 25322, 25323
Heliotropium indicum L.
det Killip

DETERMINED BY ROBERT F. MARTIN,
BUREAU OF PLANT INDUSTRY

PLANTS OF TEXAS

Quercus

(det. C. H. Muller)

Big Bend National Park, Chisos Mountains, Brewster County

E. G. Marsh, No.

Dr Mackinnon

FOREIGN ECONOMIC ADMINISTRATION
Bogotá - Colombia

M E M O R A N D U M

March 12, 1945

To: Drew, Ewan, Fassett, Fosberg, Grant, Little, McComb, and Morrison

From: M. L. Grant

Subject: Shipping of herbarium specimens

The third and last shipment of herbarium specimens collected by the botanists of the Colombian Cinchona Mission is packed, and will be sent by boat from Buenaventura as soon as possible. It consists of four wooden boxes, numbered 29-32.

The memorandum of January 15 listed the contents of the first shipment, boxes 1-25, weighing 2084 kilos, which left Buenaventura Jan. 28.

The second shipment, boxes 26-28, weighing 345 kilos, was shipped from Buenaventura March 4.

It had been planned to send these collections gratis by Army Transport Plane, but a decision of the War Department to charge full air express rates for such shipments made it impractical to do so.

As before, the plants are in numbered packages, each having on the outside a tag bearing the name of the collector and a list of the field numbers enclosed.

Appended to this memorandum is a list of your collections involved in the second and third shipments, with the contents of each package, and the numbers of the boxes in which the packages may be found. Field numbers are inclusive (except for those in parentheses), and the digits, when identical, are not repeated. "N.n." means without numbers, "n.d." without data.

FOREIGN ECONOMIC ADMINISTRATION
Bogotá - Colombia

M E M O.R A N D U M

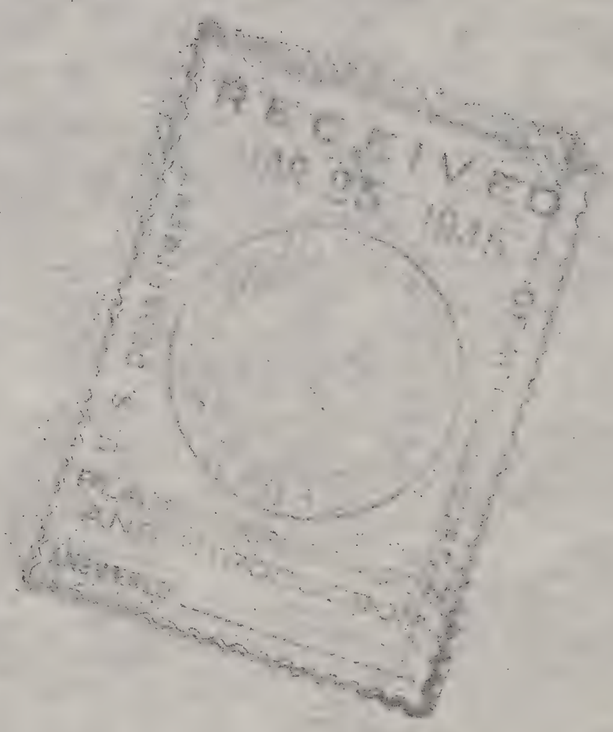
March 12, 1945

To: B. Y. Morrison, Bureau of Plant Exploration & Introduction
U.S. Dept. of Agriculture, Washington, D.C.

From: M. L. Grant

Subject: Shipment of Plant Specimens

Box Nº	Collector and Package numbers
29	Fassett 74, Fosberg 152-3, Grant 57-73, Misc. 61-72, 74-75
30	Little 166-198, 208
31	Ewan 82-114
32	Ewan 115-118, Grant 74, Little 199-207, Misc. 73



List of Plant Specimens Collected by William B. Drew in Colombia

Package №	Field Nos.
Misc. 61	717-29
62	730-40
63	741-9
64	750-67, 782, 717
65	768-70
66	771-79
67	780

These are in box № 29.

List of Plant Specimens Collected by Joseph A. Ewan in Colombia

Package Nº	Field Nos.
82	16540-47,9
83	16561-79
84	16580-89
85	16590-99
86	16600-19
87	16620-39
88	16640-49
89	16650-60
90	16661-9
91	16670-9
92	16680-9
93	16690-9
94	16700-9
95	16710-9
96	16720-9
97	16730-9
98	16741-9
99	16750-9
100	16760-9
101	16770-89
102	16790-9
103	16800-7
104	16810-9
105	16820-9
106	16830-9
107	16840-9
108	16850-9
109	16860-9
110	16870-9
111	16880-9
112	16890-6, 16807-9
113	16897-9,16910-9
114	16900-9
115	16920-9
116	16930-8
117	Wooden Box, pres. specimens
118	Carton, dried specimens

Box 31: Packages 82-114

Box 32: " 115-118

List of Plant Specimens Collected by Norman C. Fassett in Colombia

Package 74 (Nos. 25751 & 25822) is in box № 29.

In answer to your letter of Feb. 6, I regret to say that we can find no trace of any collections of yours except those previously listed.

In connection with the closing of the exploration work, Llobell has been dismissed, and presumably no further exploitation will be done by the Mission anywhere in South America, not even in Norte de Santander.

Fleas at present are confined to my wife, the rest of us having learned to live with them.

List of Plant Specimens Collected by F. Raymond Fosberg in Colombia

Package №

152 Field nos. 21886, 22390-9, (3) n.n.

153 Blank labels; Cinchona Manuals; Negatives

These are in box № 29

List of Plant Specimens Collected by Martin L. Grant in Colombia

Package №	Contents
57	Algae - Dryopteris
58	Polypodium - Cyatheaceae
59	Cyatheaceae - Gymnosperms
60	Amaryllidaceae - Gramineae
61	Palmae - Orchids
62	Dicots - Acanthaceae
63	Asclep. - Compositae
64	Compositae - Ericaceae
65	Ericaceae - Malvaceae
66	Malvaceae - Urticaceae
67	Rubiaceae
68	Fiber materials
69	" "
70	" "
71	Packets & wood specimens
72	Dried & preserved specimens
73	Dried specimen
74	Carton: fiber materials & seeds

Box № 29: Packages 57-73

Box № 32: Packages 74

List of Plant Specimens Collected by Elbert L. Little in Colombia

Package №	Contents	
166	9190-9209	
167	9210-2, 21-9	
168	9230-8, 42	
169	9243-9, 61-2, 71-6	
170	(9281-9303)	
171	9318-41	
172	(10,001-10; R.L. 2-87)	
173	Ficus (7074-9317)	
174	" (7185-8151)	
175	" (7374-8405)	Box № 30: Packages 166-198, 208
176	Ferns (8642-8950)	
177	" 9142-69	" " 32: " 199-207
178	" 9170-89	
179	" (9250-315)	
180	" 9320-79	
181	" 9381-419	
182	" 9421-67	
183	" Elaph., Acrost. Unk.	
184	" : Pto. Lopez	
185	" : Dryopteris	
186	" : Various	
187	" : Misc.	
188	" : Asplenium; trees	
189	" : Blechnum, Polyp.	
190	" : Various	
191	Fungi	
192	Cacti	
193	Cinchona off. 9383	
194	Cinchona blight	
195	Ladenberg. 9427	
196	Lad., Macroc.	
197	Misc.	
198	Errors	
199	Carton: fruits, fungi	
200	" : bark samples	
201	" : seeds, fruits	
202	" : clusia fruits	
203	Sac: fruits	
204	" : fruits	
205	" : Cinchona wood	
206	Carton: test tubes	
207	Labels	
208	9432-45	

1

List of Plant Specimens Collected by Andrew L. McComb in Colombia

In package Nº Misc. 68 is your Field Nº 117, and the labels for Nos. 82-105.

This package is in box Nº 29

List of Plant Specimens Collected by Miscellaneous Collectors in Colombia

Package №	Collectors
61	Drew 717-29
62	" 730-40
63	" 741-9
64	" 750-67, 782, 717
65	" 768-70
66	" 771-79
67	" 780
68	McComb 117, and labels for 82-105
69	Saenz 34
70	N.n., c.d.
71	Granger 25, 37
72	Carvajal 1-8
73	Hurtado
74	Cuatrecasas
75	n.n., n.d.

Inventory of papers
to BYM 28 Sept '95

ns la vallée
76: 317-

r la germination
ruits charnus.
Jl.2,1929.

arvensis Coult.
Jl.2,1929.

ent de l'embryon
Bull. Soc.
21, 1929. no.1/2.

essantes obser-
Bull. Soc. Bot.
o.3/4.

s de coniféres.
Ap.21, 1929.

ransbaïkalie.
Jl.2, 1929.

gues récoltées
de Besse
France. 76: 279-

Blake file

RECONSTRUCTION FINANCE CORPORATION
~~FOREIGN ECONOMIC ADMINISTRATION~~
OF THE UNITED STATES OF AMERICA

CABLE ADDRESS:
C/O. AMERICAN EMBASSY
QUITO, ECUADOR

U. S. Commercial Company

STREET ADDRESS:
111 MONTALVO & PIEDRAHITA STS.
QUITO, ECUADOR

March 20, 1946

This package rec'd 29 May 1946 and placed in file cabinet PL-19-1692 (3d drawer) in cattle 823

Dr. F. Ray Fosberg,
Plant Industry Station,
U. S. Department of Agriculture
Baltsville, Maryland.

Dear Dr. Fosberg:

We are in receipt of a letter dated March 11. 1946 from Mr. Peter A. McDermott, requesting that we forward to you various maps used in the Cinchona surveys as well as the card index set up by Mr. Hoffman under your instructions when you were here in Ecuador.

We have gathered together the available data requested and have made up a package containing the maps as well as the card index. We have also included a small quantity of the unused cards which may be useful in carrying forward this recording. The package has been forwarded by Boat Mail and we trust that it will be received in good condition.

Sincerely yours,

Charles W. Harris

Charles W. Harris
Business Manager

(@ 46)

@ sets to L Amer.

2 bundles were sent to Bogota — incl. those ident. & labeled by Fosb. Grant & Fassett. — Those of Grant & Fassett are checked in negative times.

No agreement need to send set of Herb. to Ecuador

The bark samples (Colo) have nos. only (?) & still in paper sacks they may have data on the sacks.

The boxes of bark here now are almost all from Ecuad. (except the 8 new boxes from Peru) (all that are coming so far as F. knows)

labels: - 9 in file in office is full set (presumably) of analyses and bark in which the chemist keeps his data

There is also 1 box already here from Col. of bark

" also 1 from Vzla. (may be all that is coming (F doesn't know @ data. Bark of Vzla. spmn. was not taken from same tree as herb spmn.)

On 1 bag (or several) in the data
The analysis sheets, card cat, & sample sheets all have same set of nos. referring to spmns & all data that is available.

F. says ca. perhaps 6000 bark samples from Colombia (all in 1 numerical scheme except first few observed were Cotton

Cinchona collections (excl. the small lots)

We have material

We don't have

Camp (he to label)

Core (")

Drew (")

Ewan (partly labeled)

Fassett (partly labeled)

Fosberg (partly labeled)

Grant (all labeled)

Hermann (all labeled)

Hodge (all labeled)

who are they?

? Little (now in Wash?)

Rusby (have set of typed labels)

St John (labels?)

? Steere (one batch here?)

Steyermark

Wiggins (he to label)

BOTANICAL COLLECTIONS OF N. C. FASSETT IN COLOMBIA, 1944.

25038 discarded

26001 - 26096 are collections in Bogota, in Santander Dept. and Norte de Santander Dept.; the data are on the sheets.

SANTANDER DEPARTMENT

April 22. Mule path to Bolivar, 10 km. N.W. of Velez.

25095. Cinchona pubescens. Tree 5 cm. D.B.H., 4 m. tall, in ravine 3 km. N.E. of Bolivar. BARK.
25096. do. Mass collection.
25097. Gramineae. Rocky side of path.
25098. Andropogon. Rocky side of path.
25099. do. Rocky side of path.
25100. Phytolacca. Mass collection along about 1 km. of path.

April 23. ½ km. S. of Berveo, 15 km. N.W. of Velez. 7000 ft. alt.

25001. Cinchona pubescens. Mass collection.
25002. Cinchona pubescens. Tree 20 cm. D.B.H., 12 m. tall, scattered on hillside. BARK.
25003. Cinchona pubescens. Tree 30 cm. D.B.H., 12 m. tall. BARK.
25104. Cinchona officinalis. Tree 5 cm. D.B.H., 2.5 m. tall, on lightly wooded hillside. BARK 3.7 TCA.
25105. Cinchona officinalis. Tree 5 cm. D.B.H., 2 m. tall. BARK 3.4 TCA.
25106. Cinchona officinalis. Mass collection.
25107. Aroid. Moist place in woods.
25108. Cinchona officinalis. Stump sprouts 4cm. tall.
25109. Cinchona officinalis. Saplings 1.5 m. tall.
25110. Rubiaceae. "Quinonę" Wooded hillside.
25111. Rubiaceae? Wooded hillside.

April 23. Berveo, along mule path toward Bolivar. 7000 ft. alt.

25112. Taraxacum. Mass collection.
25113. Phytolacca. Mass collection.
25114. Rorippa. Moist places.
25115. Gramineae.
25116. Parasite on 25115.
25117. Lycopodium. Moist bank.

April 24. Olla de Panama, 15 km. W. of Bolivar.

25118. Cinchona officinalis. Tree 10 m. tall. Densely wooded hillside. 6800 ft. alt., BARK 5.9 TCA.
25119. Cinchona officinalis. Tree 1o cm. D.B.H., 6 m. tall. Densely wooded hillside. 6500 ft. alt. BARK 4.2 TCA.
~~25123. Rubiaceae. "Quinone" Tree 20 cm. D.B.H., 6 m. tall. Densely wooded hillside. 6500 ft. Alt. BARK.~~
25120. Tree. Densely wooded hillside. 6900 ft..alt. Gent, Elongia
25121. Rubiaceae. Densely wooded hillside. 6900 ft. alt.
25122. Agrostis. Hilltop 1 km. W. of Bolivar. Alt. 9000 ft.
25123. Rubiaceae. "Quinone" Tree 20.cm. D.B.H., 6 m. tall. Densely wooded hillside. Alt.,6500 ft. BARK.
25124. Sanicula. Densely wooded hillside. Alt. 6900 ft.
25125. Viola. " " " " " "
25126. Melastomaceae. " " " " " " "
25127. Rubiaceae. " " " " " " Elongia
25128. Phytolacca. Mass collection along path.
25129. Cinchona pubescens. Londres, 10 km. W. of Bolivar. Alt. 9000 ft. BARK.
25130. Orchidaceae. Fl. orange. Path 1 km. W. of Bolivar. Alt. 9000 ft.
25131. Orchidaceae. " " " " " " " " " " "

April 26. El Espejo, near La Paz, NE. of Velez. Alt. 7300 ft.
1 25132. Cinchona officinalis. Stump sprouts 3 cm. thick, 2 m. tall, from trees cut 6 months ago. BARK 0.8 TCA.
1 25133. Cinchona officinalis. Similar sprouts. BARK 2.0 TCA.
2 25134. Rubiaceae. "Quinone" of "Quina amarilla" Tree 15 cm. D.B.H., 6 m. tall. BARK, NMTT
1 25135. Rubiaceae. "Quinone"
1 25136. Tree (said to be mistaken for Quina) Bellia Palicourea Palicourea
2 25137. Rubiaceae? Deep woods.
2 25138. Rubiaceae? Recently cleared woods.
3 25139. Rubiaceae? Recently cleared woods.
1 25130. Phytolacca. Clearing.
3 25141. Nasturtium. Stream in pastured hillside.
1 25142. Juncus. Mass collection on pastured hillside.

April 26. Thickets near Chipata, NE. of Velez.
3 25143. Oxalis.

April 27. La Sabaneta, NE. of Velez. Alt. 7200 ft.
3 25144. Polygonum. Wet spots on pastured hillside.
4 25145. Begonia. Fl..scarlet. Among down timber in cleared woods.
1 25146. Polygonum. Mass collection.
1 25147. Phytolacca. Mass collection. Among down timber in cleared woods.
3 25148. Eleocharis . Along a little stream, pastured hillside.
3 25149. Polygonum. Wet spots on pastured hillside.
3 25150. Juncus. Wet spots on pastured hillside.

April 27. Mule path, Puente Grande, NE. of Velez.
3 25151. Phytolacca/

April 27. Trail from La Paz to Velez.
3 25152. Equisetum. Stems 2 m. tall.
3 25153. Polypodium. Rocky bank.

May 4. Region about La Paz, NE. of Velez.
3 25156. Cassia. Pathway near Chipata. Fl. yellow.
3 25157. Monina. Fl. blue & yellow. Pathway near Chipata.

May 5. Region about La Paz, NE. of Velez.
10 25158. Cinchona sp. Tree 5 cm. D.B.H., 4 m. tall. Dense thicket, Agua Blanca. BARK Grahe negative. Alt. 6250 ft.
3 25159. Gramineae. Pathway in thicket, Agua Blanca. Alt. 6250 ft.
1 25160. Cinchona sp. Mass collection. Dense thicket, Agua Blanca.
3 25161. Rubiaceae. Pathway, Agua Blanca. Alt. 6250 ft.
3 25162. Rubiaceae. Pathway, Agua Blanca. Alt. 6250 ft.
1 25163. Cinchona sp. Thicket, Agua Blanca. Trunk 8 cm. D.B.H., 8 m. tall. BARK Grahe negative. Canta Ranas.
3 25164. Cinchona sp. Thicket, Canta Ranas. Tree 6 cm. D.B.H., 5 m. tall. BARK Grahe negative.
5 25165. Cinchona sp. Densely wooded ridge, Mico Cargado. Alt. 6450.
2 25166. Goodyeara. " " " " " " "
2 25167. Cinchona sp. Corolla light yellowish-green in bud, white in flower. Densely wooded ridge, Mico Cargado. Alt. 6450.
1 25168. Cinchona sp. Flowering branch. Densely wooded ridge, Mico Cargado.
1 25169. Cinchona sp. Sterile shoot. " " " " "
7 25170. Cinchona sp. Densely wooded ridge. Mico Cargado. Alt. 6450. BARK Grahe negative.

SANTANDER DEPARTMENT

May 5. Region about La Paz, E. of Velez (continued)

25171. Compositae. Woody, 3 m. tall. Thicket beside path, Canta Ranas.
25172. Rubiaceae. "Quinone" Woods, Canta Ranas. Alt. 6400 ft.
25173. Cinchona sp. Corolla fleshy, lobes and upper part of tube pale greenish-yellow ~~peach-color~~ without. Wooded ridge, Canta Ranas. Alt. 6400 ft. BARK Grahe negative.
25174. Cinchona sp. Corolla fleshy, lobes and upper part of tube peach-color without. Wooded ridge, Canta Ranas. Alt. 6400 ft.
25175. Cinchona sp. Corolla floshy, lobes and upper part of tube pale greenish-yellow without. Wooded ridge, Canta Ranas. Alt. 6400 ft.
25176. Juncus. Pastured hillside, Canta Ranas. Alt. 6400 ft.
25177. Malvaceae. Coarse herb 2 m. tall; corolla and filament tube yellow, anthers cream or yellow, stigmas scarlet. Moist pasture, Canta Ranas. Alt. 6300 ft. Hibiscus
25178. Cinchona pubescens. Stump sprouts; only tree seen in region. Pasture, Canta Ranas. Alt. 6300 ft.
25179. Cinchona officinalis. Seedling or stump sprout, 1 m. tall; Red on stem, older stipules, midrib of young stipules, petioles, midribs above, and leaves below. Edge of woods, Canta Ranas, Alt. 6400 ft.
25180. Monina. Buds green or dark blue; flowers blue with yellow keel; fruits scarlet. Canta Ranas. Alt. 6400 ft.
25181. Phytolacca. Mass collection, path from Canta Ranas to Agua Blanca.

May 6. La Paz, east of Velez. No. 14 Alt. 6300 ft.

25182. Taraxacum. Mass collection. Street in town.
25183. Cinchona pubescens. Tree 30 cm. D.B.H., overhanging stream in ravine ½ km. N.E. Corolla tube scarlet without, amd within except for ciliate margin.
25184. Pteridium. Trail N.E. Only one lower dividion of frond collected. S
25185. Citrus. Cultivated, hotel.
25186. Daucus. Pathway up ravine ½ km. N.E.
25187. Cinchona pubescens. Stump sprout. Ravine ½ k.. N.E.
25188. Rubus (Eubatus) Pathway in pastured ravine.
25189. Araceae. Wet wooded bank near stream. Spathe usually light pink, white of some clones.
25190. Cyclanthaceae. Edge of stream, partly in water.
25191. Melastomaceae. Tree, ¼ km. northof town.
25192. Andropogon. Clay soil along trail.
25193. Piperaceae.

May 7. West of La Paz on trail to Recreo. May 4 East of Velez.

25194. Ladenbargia. Tree 8 m. tall. 1.5 km. W. of La Paz. Alt. 6800 ft. BARK, NMTT.
25195. Cinchona sp. 1 km. W. of La Paz.
25196. Cinchona sp. Trail between La Paz and Recreo. Alt. about 5000 ft.
25197. Usnea. "Barba de palo" On trees. Alt. about 4500 ft.
25198. Cephaelis. About 6 km. W. of La Paz.
25199. Phytolacca. 5 km. W. of La Paz.
25200. Cinchona officinalis. Stump sprout. 1 km. W. of La Paz.

SANTANDER DEPARTMENT

May 8. Cerro de Quinal, Recreo. Alt. 3600 ft. N. of Velez.

4 25201. Cinchona Henleana. Tree 5 m. tall, 8 cm. D.B,H. BARK.
1 25202. Cinchona Henleana. Single sterile stem in woods, 3 m. tall.
1 25203. Rubiaceae.
2 25204. Remijia pedunculata. BARK 2.5 TCA.
7 25205. Remijia pedunculata. Tree with insect galls. BARK 3.3 TCA,2.9 QS .
1 25206. Remijua pedunculata. Mass collection.
7 25207. Remijia pedunculata. Tree with insect galls. BARK, NMTT/ 1.9 TCA.
4 25208. Cinchona Henleana. Corolla white, with light greenish-yellow tube. BARK, NMTT
8 25209. Cinchona Henleana. Corolla white, with light greenish-yellow tube. BARK, NMTT.
2 25210. Palmae. Leaves from a small tree, fruit from a tall one.
1 25211. Cinchona Henleana. Mass collection.
2 25212. Eryngium. In garden.

May 9. Between Recreo and Mira Buenos, about 25 km. N.W. of Velez.

6 25213. Cinchona Henleana. Alt. 2800 ft. BARK, NMTT.
10 25214-16. Cinchona Henleana. Sterile tips of young trees.
3 25217. Gramineae. Grown in clearings for horse feed,
1 25218. Phytolacca. Clearing east of Quebrada la Negra. Only one seen.
4 25219. Warzewiczia. Recreo.

May 10. Between Mira Buenos and Jordan, about 50 km. N. of Velez.

5 25220. Cinchona Henleana. Woods west of Rio Quirata. Alt. 2600 ft. BARK.
1 25221. ? Small little-branched tree, 5 m. tall.
6 25222. Pasoqueria. Corolla white. East side of ridge between Rio Quirata and Jordan. Alt. 3300 ft. BARK, NMTT.
4 25223. Cinchona Henleana. Summit of ridge between Rio Quirata and Jordan. Alt. 3800 ft. BARK, NMTT.
2 25224. Melinis. Mira Buenos. Common.

May 13. Velez.

1 25225. Taraxacum. Mass collection, city streets.

May 14. Jordan, 50 km. N. of Velez. With H. St. John.

5 25226. Ladenbergia. Tree 10 m. tall. 30 cm. D.B.H.; leaves dark green with veins reddish beneath. Forest r mnant, alt. 3100 ft.
6 25227. Cinchona Henleana. Tree 8 m. tall, 20 cm. D.B.H.; leaves dark shining green; corolla white. Temperate forest, alt. 2800 ft. BARK.
4 25228. Remijia pedunculate. Tree 7 m. tall, 10 cm. D.B.H.; leaves dull green. Patch of temperate forest, alt. 2800 ft. BARK.
1 25229. Remijia pedunculata. Mass collection.
3 25230. Ladenbergia. Tree 15 m. tall, 30 cm. D.B.H.; leaves shining green. Patch of temperate forest, alt. 2600 ft.
4 25231. Ladenbergia. "Brazil" Tree 12 m. tall, 30 cm. D.B.H.; leaves shining above, lighter beneath. Temperate forest, alt. 2600 ft. BARK
4 25232. Miliaceae. Tree 15 m. tall, 30 cm. D.B.H.; leaves crowded and plume-like on branch; calyx pink; anthers yellow. Forest by stream, alt. 2700 ft.

SANTANDER DEPARTMENT

May 14. Jordan, 50 km. N. of Velez. With H. St. John. (continued)

25233. Rubiaceae. Tree 8 m. tall, 10 cm. D.B.H.; leaves above dark shining, below pale green; calyx pink; corolla blue;.fruit dry. Temperate forest, 2700 ft.

25334. Phytolacca. Mass collection. Sprawling herbs 1-2 m. tall. Several km. of trail and clearings, La Venezia.

25235. Rubiaceae. Shrib 1.5 m. tall; leaves above dark shining green, below green; inflorescence yellowish green. Temperate forest, alt. 2600 ft.

May 15. Jordan to La Soledad, 50 km. N. of Velez. With H. St.John.

25236. Remijia pedunculata. Tree 5 m. tall, 5 cm. D.B.H.; flowers white; bark peels hard. El Peligro, 4 km. N.E. of Jordan. Patch of temperate forest, alt. 3200 ft. BARK.

25237. Remijia pedunculata. Sucker shoots.

25238. Remijia pedunculata. Jolandas, 6 km. N.E. of Jordan. Alt. 3300 ft.

25239. Cephaelis. Shrub 1.5 m. tall; bracts rose magenta.

25240. Phytolacca. Mass collection. La Soledad, 20 km. N.E. of Jordan; none seen en route.

May 16. La Soledad to La Putana, 20 km. N.E. of Jordan, 70 km. N.E. of Velez. With H. St.John.

25241. Cyperaceae. Erect 2 m. then sprawling on bushes. Wet tropical forest, 3200 ft.

25242. Carica. "Papaya de monte" 3 m. tall; fruit said to be full size but green, yellow when ripe, edible. Moist tropical jungle, alt. 3200 ft.

25243. Cinchona Henleana. Tree 10 m. tall, 10 cm. D.B.H. Common in moist tropical jungle, La Putana, alt. 3200 ft.

25244. Rubiaceae. "Graniso" Shrub 1.5 m. tall; flowers white. Wet tropical forest. alt. 3200 ft.

25245. Cinchona Henleana. Mass collection. La Putana.

May 17. 10 km. N.E. of Jordan, 60 km. N. of Velez. With H. St.John.

25246. Rubiaceae. Corolla orange; calyx light green and fleshy. Rocky bank (of Rio de la Vuida?).

May 19. Jordan, 50 km. N. of Velez.

25247. Oxalis. Weed in window box.

25248. Sida. Roadside weed.

25249. Sida. Roadside weed. Flowers yellow.

25250. Polygonum. Roadside weed.

25253. Chlorideae. Roadside weed.

SANTANDER DEPARTMENT

May 21. Jordan, 50 km. N. of Velez.

25251. Joosia. Tree 6 m. tall, 5 cm. D.B.H.; stipules standing at almost 90 degrees as they age; corolla 1.5 cm. wide, white, with lobes bifid and irregular-margined. Steep heavily wooded slopes, Quebrada de Pompeia, alt. 2600 ft. BARK.

25252. Cinchona sp. San Jerónimo, alt. 2600 ft. BARK.

25253. (see after 25250)

25254. Ladenbergia? Corolla white, with strong odor of Jasmine.

25255. Joosia.

25256. Joosia. Sprouts.

25257. Calycophyllum? Steep heavily wooded slope, Quebrada de Pompeia.

25258. Calycophyllum? Fruiting inflorescence fallen from tree.

25259. Polypodiaceae. Rotting log near Quebrada de Pompeia.

25260. Polypodiaceae. " " " " " "

May 22. Jordan, 50 km. N. of Jordan.

25261. Joosia. Stipules spreading at almost 90 degrees in age. About 2 km. E. of Jordan on path to Mira Buenos.

25262. Gramineae. Overhanging trial, 4 m. tall, much branched. About 1 km. N.W. of Mira Buenos.

May 23. Mirasol, E. of Jordan.

25263. Remijia pedunculata. Densely wooded hillside, 2700 ft. Fruits on tree felled 6 months ago.

25264. Remijia pedunculata. Tree 5 m. tall, 5 cm. D.B.H. BARK.

25265. Remijia pedunculata. Tree 12 m. tall, 20 cm. D.B.H., lower 3 m. stripped 6 mo. ago; still living, with fruits. BARK.

25266. Remijia pedunculata. Tree 10 m. tall, 10 cm. D.B.H. BARK.

25267. Remijia pedunculata. Tree 6 m. tall. 8 cm. D.B.H. BARK.

25268. Malvaceae. "Abrago" Common weed in pastures and along pathways, the fruits commonly sticking to animals and to clothes. Flowers very pale pink. Pavonia

25269. Bidens. "Cadillo" Weed in garden.

25270. Cyperus. "Tote" Weed in garden.

25271. Paspalum. "Grama blanca" Common along pathways.

25272. Cyperus. Weed in garden.

~~25273. Cyperus. Weed in garden.~~

25273. Chlorideae. Common in pastures, moist ground, etc.

25274. Erechtites. Weed in garden.

25275. Erechtites. Weed in garden.

25276. Cyperus. Weed in garden.

May 24. Wet woods along Rio Quirata, near Mirasol, E. of Jordan.

25277. Ipecacuanha?

25278. Fungus. On rotting wood.

25279. Xylaria. Rotting wood.

25280. Clavaria? Rotting wood and leaves on the ground.

May 25. About 1 km. E. of Jordan on path to Mira Buenos.

25281. Shrub.

Sapanuna

SANTANDER DEPARTMENT

May 26. San Jeronimo, ½ km. N.E. of Jordan, 50 km. N. of Velez.
25282. Cinchona sp. Tree 5 m. tall, 5 cm. D.B.H. BARK.
25283. Cinchona sp. Wooded ridge.
25284. Cinchona sp. One sprout, in sections.
25285. Cinchona sp. Mass collections.
25286. Ladenbergia? (Same as #25254) BARK.
25287. Ladenbergia? Young twigs.

May 27. Jordan, 50 km. N. of Velez.
25288. Rubiaceae? Tree 20 cm. D.B.H.; calyx green; corolla white. Dense woods, steep canyon W. of road. BARK.
25289. Rubiaceae? Small tree; corolla yellow. Steep canyon W. of road.
25290. Heteranthera. Flowers white. Roadside ditch.
25291. Passiflora. Sepals light green with one border white; petals white; outer corona purple and yellow, inner light green; filaments deep purple; anthers yellow outside, green and pueple-margined inside. Hanging down rock cliff.
25292. Basidiolichen? Rock cliff, road cut.
25293. Eleocharis. Tendency toward vivipary, and with bract like Scirpus debilis. Roadside ditch.

BOYACA DEPARTMENT

June 6. 5. km. W.S.W. of Arcabuco, valley Rio Pomera
25294. Orthosanthus. Cliff. Flowers blue.
25295. Lichen. Rock cliff.
25296. Lichen. Rock cliff.
25297. Fragaria. Roadside weed.
25298. Orchidaceae. Petals dull-yellow-brown, with dark red veins; column dark red. Lightly wooded rock cliff.

CUNDINAMARCA DEPARTMENT

June 6. N.E. of Gachancipa
25299. Raphanus. Petals purple, dark-veined. Very abundant and coloring acres of field.
25300. Polygonum. Weed in field.

SANTANDER DEPARTMENT

June 7. Barbosa
25301. ~~Fragaria~~. Petals yellow. In patio, Gales Hotel. Ranunculus sp.
25302. Brassica. Roadside, road to Velez.

June 8. 12 km. N. of Velez.
25303. Cardamine. Wet talus.

June 9. La Flores, 14 km. N. of Landazuri, 85 km. N. of Velez. 2000 ft.
25304. Digitaria. Roadway.
25305. Euphorbia. Roadside.
25306. Gramineae. Driveway. Eragrostis
25307. Portulaca. Driveway.
23308. ~~Jasmine~~. Allamanda

SANTANDER DEPARTMENT

June 9. Steep wooded hillside, La Flores, 2050 ft., 85 km. N. ofVelez.

25309. Rubiaceae. BARK turns red inside
25310. Rubiaceae. BARK turns red slightly or not at all.
25311. Rubiaceae. (no herbarium specimen) BARK turns pale peach-color, Grahe negative.
25312. Rubiaceae. (no herbarium specimen) BARK remains nearly white, Grahe negative.
25313. Rubiaceae. Mass collection.

June 10. Cimitarra, 100 km. N. of Velez

25314. Remijia pedunculata. Tree 20 cm. D.B.H., stripped 1.5 m. 6 mo. ago. Flowers white. Wooded ridge, alt. 1350 ft. BARK 2.2 TCA.
25315. Remijia pedunculata. Mass collection. About ½ km. of path along wooded ridge, alt. 1350 ft.
25316. Remijia pedunculata. Tree 15 cm. D.B.H., stripped 1 m. 6 mo. ago. BARK 2.2 TCA. 1350 ft.
25317. Ladenbergia? Trunk 40 cm. D.B,H. BARK Grahe Negative. 1350 ft.
25318. Remijia pedunculata. 5 cm. D.B.H. BARK Grahe negative. 1350 ft.
25319 Remijia or Ladenbergia? Seedling. 1350 ft.
25320. Cyperus. Cleared hillside with Molasses Grass. Alt. 1300 ft.
25321. Cyperus. Cleared hillside with Molasses Grass. Alt. 1300 ft.
25322. Herb with blue flowers. Bank of stream in pasture. 1300 ft.
25323. Same sp., flowers white. " " " " " " "

June 11. Forest S.W. of Cimitarra, in headwaters of Quebrada San Juan, 100 km. N. of Velez

25324. Remijia sp. Tree 12 cm. D.B.H.; flowers yellowish white; bark bright yellow within. 3 km. S.W. of Cimitarra. BARK 1500 ft.
25325. Remijia sp. Mass collection.
25326. Remijia sp. Seedlings 2 m. tall.
25327. Remijia sp. Tree 20 cm. D.B.H. BARK.
25328. "Bejuco de Gras" Long stout vine, source of drinking water. Forest about 4 km. S.W. of Cimitarra. Alt. 1650 ft.
25329. Remijia sp. Tree 12 cm. D.B.H. Forest about 4.5 km. S.W. of Cimitarra. Alt 1650 ft. BARK NMTT.
25331. Remijis sp. Mass collection.
25332. Remijia sp. Collected near Cimitarra by Richardo Carbagal. BARK 2.1 TCA. Dr. Bellis writes: "This sample was highly resinous, very dark colored and too difficult to clear the ppts. well enough to give wholly satisfactory results."

June 12. La Quitiana, near Quebrada San Juan, about 90 km. N. of Velez.

25333. Remijia sp. Tree 15 cm. D.B.H.; flowers white. Wooded ridge, 1400 ft. STIPULES, BARK Grahe negative.
25334. Remijia sp. Tree 12 cm. D.B.H. STIPYLES, BARK Grahe negative.
25335, Remijia sp. Mass collection.
25336. Remijia pedunculata. Tree 12 cm. D.B.H., stripped for about 1 m. STIPULES, BARK 2.0 TCA, less than 1.8 QS. Alt 1650 ft.
25337. Remijia pedunculata. Tree 10 cm. D.B.H. STIPULES, BARK 1.4 TCA.
25338. Remijia pedunculata. Trunk stripped 40 ck. STIPULES, BARK 1.8 TCA.
25339. Remijia pedunculata. Trunk 8 cm. D.B.H. STIPULES, BARK
25340. Remijia pedunculata. Trunk 12 cm. D.B.H., stripped 1 m. STIPULES, BARK.
25341. Remijia pedunculata. Trunk 12 cm. D.B.H. STIPULES, BARK 1.9 TCA.
25342. Remijia pedunculata. Trunk 15 cm. D.B.H., stripped 1.5 m. STIPULES, BARK 1.8 TCA, less than 1.7 QS.

SANTANDER DEPARTMENT

1 25343. Remijia pedunculata. Mass collection. Alt. 1650 ft.
7 25344. Ladenbergia? Trunk 30 cm. D.B.H.; flowers white. Alt. 1650 ft. BARK Grahe Negative.
2 25345. Remijia sp. 1400 ft., with # 25333-35. STIPULES.
1 25346. Phytolacca. Mass collection. Pastured clearing, 1350 ft.

June 14. La Union, about 110 km. N. of Velez. Wooded ridge.
4 25347. Remijia sp. Trunk 10 cm. D.B.H. STIPULES, BARK Grahe negative.
3 25348. Remijia sp, Trunk 8 cm. D.B.H. STIPULES, BARK Grahe negative.
3 25349. Remijia sp. Trunk 12 cm. D.B.H. STIPULES.
1 25350. Remijia sp. Trunk 6 cm. D.B.H. STIPULES.
1 25351. Remijia sp. Mass collection.
1 25352. Remijia.sp. Corollas on the ground; white, mostly 5-parted, a few 4-parted.
3 25353. Andropogon. Cleared spot on ridge.

June 15. Puerto Olaya. Alt. about 400 ft.
3 25354. Salvinia. Edge of stream.
4 25355. Gramineae. Stems rooting at nodes, trailing in water.
1 25256. Pteridophyta. Floating on surface of water. Ceratopteris
3 25357. Cyperaceae. Wet swale.
3 25358. Echinochloa. In shallow mud on a bridge.
3 25359. Cyperaceae. Wet swale.
4 25360. Azolla. Floating in quiet water.
1 25361. Salvinia. Edge of stream.
3 25362. Lemna. Edge of stream.
3 25363. Spirodala. Floating in quiet water with Azolla.
3 25364. Gramineae. 2 m. tall. Roadside ditches and along Rio Magdalena.
4 25365. Ludwigia? Petals 5, yellow. Roadside ditch.
3 25366. Leguminose. Shrub. Roadside. Indigofera suffruticosa
3 25367. Canna. Flower scarlet. Roadside ditch.
3 25368. Euphorbia. Roadside.
1 3 25369. Leguminosae. Leaves sensitive. Roadside.
3 25370. Commelina. Roadside.

June 16. Puerto Olaya. Alt. about 400 ft.
3 25371. Utricularia. Quiet pool.
3 25372. Shrub said to poison bulls. Finca of Amilio Piedrahata, 6 k. E. of Puerto Olaya.
3 25373. Cyperaceae. Shallow water of swale. about 7 km. E. of Puerto Olaya.

June 17. Finca of Amilio Londoño, 6 km. W. of Puerto Aquileo
Alt. about 450 ft.
4 25374. Gramineae. One patch in recently cleared and burned land; the fine masses of panicles look like white mist in the sunshine.
1 25375. Phytolacca. Mass collection. Recently cleared and burned land.
3 25376. "Saiba". Tree, sometimes very large, with spiny trunk; milky juice said to be used for fish poison Hura crepitans?

June 18. 6 Km. W. of Puerto Aquilio.
25377. Mimosa. Roadside.

June 18. Agua Fria, near Cimitarra, 100 km. N. of Velez.
25378. Heliconia. Leaf blades 1.5 m. long, petioles a little longer; inflorescence pendulous; bracts yellow and red. Low ground along Rio Guayabita.

June 19. About 90 km. N. of Velez.
25379. Lemna. Small pool in stream, about 10 km. S.E. of Cimitarra.

June 19. Densely wooded ridge, La Venezia, near Jordan, 50 km. N. of Velez. Alt. 2800 ft.
25380. Remijia pedunculata. Tree 10 cm. D.B.H. STIPULES, BARK
25381. Remijia pedunculata. Tree 10 cm. D.B.H. STIPULES, BARK.
25382. Remijia pedunculata. Tree 10 cm. D.B.H. STIPULES, BARK
25383. Remijia pedunculata. Tree 10 cm. D.B.H. STIPULES, BARK.

June 20. Steep wooded hillside, La Florez, 85 km. N. of Velez. 2050 ft.
25384. Rubiaceae. Tree 10 cm. D.B.H. STIPULES, BARK Grahe negative
25385. Rubiaceae. Plants 2 m. tall.
25386. Tree 8 cm. D.B.H. STIPULES, BARK Grahe negative. Rubiaceae.
25387. Rubiaceae. STIPULES, BARK Grahe negative.
25388. Ipecacuanha? Plants rare, growing singly.
25389. Ipecacuanha? Mature berries blue.
25390. ? Berries red; petals white.
25391. Rubiaceae. Tree 7 cm. D.B.H. STIPULES, BARK.
25392. Rubiaceae. Tree 5 cm. D.B.H.? STIPULES, BARK Grahe negative.

June 21. "Nueva York", finca in the hills between Landazuri and La Florez, about 75 km. N. of Velez. Alt. 3650 ft.
25394. Remijia pedunculata. Tree 15 cm. D.B.H. STIPULES, BARK
25395. Remijia pedunculata. Trunk 8 cm. D.B.H. STIPULES, BARK 1.2 TCA
25196. Remijia pedunculata. Tree 8 c.. D.B.H. STIPULES, BARK 0.7 TCA
25397. Remijia pedunculata. Tree 8 c,. D.B.H. STIPULES, BARK 1.0 TCA
25398. Remijia pedunculata. Fruits from tree previously felled.
25399. Remijia pedunculata. Mass collection.
25400. Remijia pedunculata. Fruits from tree previously felled.
25401. Remijia pedunculata. Tree 5 cm. D.B.H. STIPULES, BARK 1.0 TCA
25402. Canna. "Sugo" Cultivated.
25403. Cinchona Henleana. Flowers with odor of jasmine.

June 22. Cimitarra, 100 km. N. of Velez.
25204. Ludwigia. Flowers yellow. Wet margin of small stream.
25405. Creeping vine. Flowers yellow.

June 27. Landazuri, 70 km. N. of Velez.
25406. Gramineae. On wet cliff.
25407. Cephaelis. Dense woods, "Alta Mira", 15 km. N. of Landazuri.

June 28. Landazuri, 70 km. N. of Velez.
25408. Phalloid. On rotton log, "Mira Alta2, 15 km. N. of Landazuri.

SANTANDER DEPARTMENT

Gentianaceae

June 29. Cerro de Armas region, about 90 km. N. of Velez.

1 25409. Root parasite? Corolla purple, 6-parted, 3 lobes larger; young fruit white; stem and scale leaves dark purple. Deep forest, Cerro la Isla. Alt. 3000 ft.

3 25410. Melastomaceae. Pubescence purple; inflated leaf-bases with ants; young fruit orange. Deep forest, Cerro la Isla. Alt 3000 ft.

5 25411. Rubiaceae. Deep forest, Cerro la Isla. Alt 3000 ft.

4 25412. Cinchona Honleana. Near Cerro de Paramo, Alt. 3000 ft. Collecter Jaime Llobell E.

June 30. Cerro de Paramo, Cerro de Armas region, 90 km. N. of Velez

6 25413. Rubiaceae. Flower white, slightly yellowish outside, with odor of Jasmine. Exposed peak, 6200 ft. BARK, Grahe negative.

3 25414. Rubiaceae. Trunk 8 cm. D.B.H. BARK Grahe negative

3 25415. Orchidaceae. Forming dense thickets 2 m. high. Alt. 6000 ft.

2 25416. ~~Befaria?~~ Shrub paramo, Alt. 6200 ft. Vaccinium

1 25417. ? Shrub paramo, alt. 6200 ft. Bracts & flowers deep pink.

1 25418. Musci. Draping tree trunks for 2 m. Alt. 6200 ft.

4 25419. ~~Musci~~. Draping tree trunks for 2 m. Alt. 6200 ft. Trichomanes

2 25420. Pteridophyta. On tree trunks. Alt. 6200 ft.

3 25421. Lycopodium. Stem 2 m. long. Alt. 6000 ft. L. cernuum L.

3 25422. Cinchona sp. Wooded ridge at 5300 ft. (occurs to 6000 ft).

1 25423. Cinchona sp. Mass collection. No leaves with red veins.

1 25424. Root parasite? Lower stem purplish, rest of plant white. Deep woods, 6000 ft.

25425. Goodyera? Deep woods, 5500 ft. Leaves reddish on smaller plant.

July 1. Cerro de Armas region, about 90 km. N. of Velez.

4 25426. Araceae. In clearing, Cerro la Isla, 3000 ft. Petiole 1.5 m. long, rolled at base, green and marked with whitish; blade 2-parted; corm 1 cm. in diameter, said to be ground and used for snake bite.

6 25427. Rubiaceae. Tree 12 cm. D.B.H.; buds dee pink much like Cinchona pubescens. Near headwaters of Quebrada de Armas, about 4500 ft. Rustia?

6 25428. Rubiaceae. Flowers white. Deep forest near headwaters of Quebrada de Armas.

2 25429. "Yerba Crista" Each leaf with 1 or 2 blood-red spots; flowers yellow. Deep forest, Cerra la Isla, 3000 ft. Commelinaceae

4 25430. Commelinaceae. Plants 2 m. tall; flowers white, deep pink at base. Rocky stream-bed in dense woods, Cerro la Isla, 3500 ft.

2 25431. ? Vine said to bave been used by the Indians for poisoning arrows; also sold in the market at Velez, the guides know not why.

July 2. Cerro de Paramo, Cerro de Armas region, 90 km. N. of Velez

3 25432. Gentianaceae? Flower scarlet. Shrub paramo, 6200 ftl

4 25433. Bromeliaceae. Arboreal, 6200 ft.

4 25434. Bromeliaceae. Flowers scarlet. Arboreal, 6200 ft.

4 25435. Neurolepis? Selected small specimens; some are 1.5 m. long. Roots coated with clear colorless jelly. Called "Langua jira2 and said to be characteristic of tierra fria and often to grow with quina.

July 3. Landazure, 70 km. N. of Velez.

7 25436. Melastomaceae. Inflated leaf-bases inhabited by ants. Woods about lo km. N. of Landazuri.

SANTANDER DEPARTMENT

July 4. East side of Rio Guayavita, on wooded hillside 10 km. S. of Cimitara, about 90 km. from Velez. Guided by Luis Rubiano.

1 25437. "Ipecuanha morada" About 20 plants in area of 2 m. in diameter. Rootstocks 12-15 mm. thick; berries blue. ROOT SAMPLE.
3 25438. "Ipecacuanha amarilla" Same locality. Berries said to be yellow.
3 25439. "Ipecacuanha amarilla" Same locality, low ground along river. Five plants in area of 2 m. ROOT SAMPLE.
3 25440. "Ipecacuanha amarilla" 5 plants seen. ROOT SAMPLE.

BOYACA DEPARTMENT

July 6. Paramo between Tunja and Arcabuco.

1 25441. Phytolacca. Roadside.
1 25442. Polytrichum.
1 25443. Oxalis. Flowers yellow.
1 25444. Oxalis. Flowers yellow.
4 25445. Viola. Calyx purple; corolla white.
1 25445. Compositae.
1 25447. ? Lobelia erella.
1 25448. Vicia?
1 25449. Cladonia.

July 6. Paramo south of Tunja, on road to Bogota.

4 25450. Dicronema?
1 25451. Hypericum. Flowers yellow.

3 25452
3 25453

CUNDINAMARCA DEPARTMENT

July 14. Roadside, 23 km. N. of Bogota.

3 25454. Oxalis. Leaves fleshy; flowers yellow.
3 25455. Oxalis. Flowers yellow.
3 25456. Oxalis. Stems creeping; flowers yellow.
4 25457. Oxalis. Stems creeping; flowers yellow.
3 25458. Spergula.
6 25459. Prunus. Tree 20 cm. D.B.H.
1 25460. Prunella?
1 25461. Prunella.
3 25462. Galinsoga. Rays white above, purple beneath.
4 25463. Achillaea. Rays purple. Pasture near road.

3 64 Rumex

3 65 sedge

SANTANDER DEPARTMENT

July 16. Wooded ridge, 1350 ft., Cimitarra, 100 km. N. of Velez

25466. Melastomaceae. Flowers white. Edge of woods.

25467. Remijia pedunculata. Tree 12 cm. D.B.H. Bark & twigs pickled for morphological study; STIPULES, BARK 2.3 TCA.

25468xxxRemijiaxxspxxx

July 16. Forest 3 km. S.W. of Cimitarra, 1600 ft., 100 km. N. of Velez

25468. Remijia sp. Tree 14 cm. D.B.H. Bark & twigs pickled for morphological study; STIPULES, BARK.

25469. Remijia sp. STIPULES.

July 17. Wooded ridge. 1350 ft., Cimitarra, 100 km. N. of Velez

25470. Remijia pedunculata. One of trees cut as #25314-18. STIPULES only.

25471. Remijia pedunculata. One of trees cut as # 25314-18.STIPULES only

25473. Remijia pedunculata. One of trees cut as #25413-17. STIPULES only

25473. Pemijia pedunculata. Bark & twigs pickled for morphological study; STIPULES.

25474. Remijia pedunculata? Tree 2 m. tall., 4 cm. D.B.H., with many large-leaves sprouts. STIPULES.

July 17. Wooded hillside near Quebrada San Juan, 17 km. N. of Landazuri, about 90 km. N. of Velez. (Same as Fosberg & Fassett #21830-42).

25475. Remijia pedunculata. Bark & twigs pickled for morphological study; STIPULES.

25476. Remijia pedunculata. STIPULES.

25477. Rubiaceae. Like #25384-87.

25478. Remijia pedunculata. Small plant 2 m. tall.

July 18. Jordan, 50 km. N. of Velez.

25479. Remijia pedunculata. Hilltop called "Jordan." STIPULES; BARK collected with Lieut. Ronzani for his fresh bark extraction.

25480. Cinchona sp. (See #25282) Wooded ridge, San Jeronimo. Bark & twigs pickled for morphological study.

25481. Cinchona Henleana. Along path to La Venezia. Bark & twigs pickled for morphological study.

25482. Remijia pedunculata. Tree 10 cm. D.B.H. Hilltop called "Jordan" STIPULES; BARK collected with Lieut. Ronzani for his fresh bark extraction.

25483. Remijia pedunculata. Tree 25 cm. D.B.H. Hilltop called "Jordan." STIPULES; BARK;collectedxwithxLieutxxRonzanixforxhisxxxx freshxbarkxextractionxxx bark & twigs pickled for morphological study.

25484. Remijia pedunculata. Small tree 4 cm. D,B,H. STIPULES.

25485. Remijia pedunculata. Tree about 10 cm. D.B.H.? STIPULES.

July 19. Roadsides 17-18 km. N. of Velez.

25486. Phytolacca. Mass collection.

July 20. Oiba.

25487. Gynerium

SANTANDER DEPARTMENT

July 21. Roadside 12 km. N. of Socorro. Alt. 5400 ft.

8 25488. Rubiaceae. Tree 6 m. tall; flower sith odor of jasmine; corolla white turning cream-yellow. Bark & twigs pickled for morphological study.

July 22. City streets, Zapatoca. Alt. 5650 ft.

5 25489. Oxalis. Flowers yellow.
5 25490. Ambrosia. Foliage fragrant.
4 25491. Malva. Flowers light blue.
3 25492. Panicum.
3 25493. Setaria.
3 25494. Sporobolus?
1 25495. Gramineae. Spikelets purple-green. Paspalum fimbriatum
3 25496. Gramineae.
3 25497. Digitaria.
4 25498. Lepidium.

July 22. Dry hillside ½ km. S. of Zapatoca. Alt. 5650 ft.

9 25499. Gramineae. Trichloaena repens
4 25500. Chlorideae. Chloris inflata?
4 25501. Galium. Flowers lemon-yellow.
8 25502. Chlorideae?
1 25503. Bidens.
3 25504. Setaria. Setae and styles red.
3 25505. Sporobolus? Spikelets reddish.
1 25506. Lichen. Yellow-orange.
7 25507., Eryngium. Flowers white.
2 25508. Cenchrus.

July 23. Mountain west of Zapatoca.

3 25509. ~~Onoclea~~? Among dry rocks. Alt. 5000 ft. Anemia
4 25510. Hieracium. Dry pasture. Alt. about 7000 ft.
3 25511. Lepidium. Weed in finca on W. side of mountain. Alt. 8000 ft.
3 25512. Polygonum. "Barbasco" Weed in finca. Alt. 8000 ft.
13 25513. Cinchona pubescens. Tree 1 m. D.B.H., broken and with only one remaining branch 0.5 m. in diameter. Woods on W. side of mountain. Bark & twigs pickled for morphological study; BARK. Alt. 8400 ft.
7 25514. Andropogon. Dry pastured mountainside. Alt. 6400 ft.
25515. Gramineae. Tufted. Dry pastured mountainside. About 7000 ft.
1 25516. Orchidaceae. Flowers rose-color. 8200 ft., on E. side of mountain.
1 25517. Orchidaceae. Flowers rose-color. 8200 ft., on E. side of mountain.
3 25518. Ophioglossum. In Polytrichum mat on a flat rock. Green portion fleshy. W. side of Mountain, 8300 ft.
4 25519. Cruciferae. Flowers purple. On moist banks, 8300 ft
3 25520. Galinsoga. Rays white; tubes yellow. Grassy hillside, 8300 ft.
3 25521. Galinsoga. Rays and tubes yellow. Grassy hillside, 8300 ft.
1 25522. Caryophyllaceae. Moist bank, 8300 ft.
3 25523. Caryophyllaceae. Moist bank, 8300 ft. Cerastium
3 25524. Caryophyllaceae. Moist bank, 8300 ft. Cerastium
2 25525. Caryophyllaceae. Moist bank, 8300 ft. Stellaria Arenaria?
3 25526. Caryophyllaceae. Moist bank, 8300 ft.
4 25527. Commelina. Flowers white. Grassy hillside, 8300 ft.

also X grass 6

SANTANDER DEPARTMENT

July 24. Zapatoca

25528. Labiatae. Said to be haemostatic. Thickets in pasture S. of town.
25529. Hyptis. Dry rocky hillside W. of town. Alt. 5700 ft.
25530. Dry rocky hillside W. of town. Alt. 5700 ft.

July 25. West of S. Vicente de Chucuri.

25532. Bidens. Roadside, Nuevo Mundo, valley of Quebrada la Llana.
25533. Cyperaceae. Cement foundation under bridge, Q. la Llana.
25534. Gramineae. Wooded bank, roadside. Nuevo Mundo, near Rio Oponcito.
25535. Leguminosae. Moist brnk near Rio Oponcito.
25536. Mimosa. Flowers white. Roadside weed, Nuevo Mundo.
25537. Mimosa. Flowers pink. Roadside weed, Nuevo Mundo.

July 26. Junction of roads to Bucaramanga and to Zapatoca, 3 km. E. of S. Vicente de Chucuri. Alt. 2800 ft.

25538. Apocynum. Flowers orange. Rauvolfia cruciarica L.
25539. Leguminosae. Desmodium
25540. Mimosa. Flowers pink.

July 28. Chima.

25541. Rubiaceae. Tree in forest along Quebrada Chima, 10 km. W. of Town.
25542. Rubiaceae. Tree in forest along Quebrada Chima, 10 km. W. of town. Psychotria?

July 29. Mountains west of Chima, valley of Quebrada Chima.

25543. Cinchona Henleana. Forested hillside along Q. Chima. 4200 ft.
25544. Habenaria. Grassy hillside. 4800 ft.
25545. Cinchona Henleana. Forested hillside. 4700 ft.
25546. Bilia Tree called "Quino" and said to be used for paludismo. Alt. about 4600 ft.

July 30. Headwaters of Q. Chima, in mountains west of Chima.

25547. Cinchona officinalis. Tree 15 cm. D.B.H.; flowers dark red; stipules green. Dense forest at 7500 ft. Bark & twigs pickled for morphological study; BARK.
25548. Cinchona officinalis. Tree 15 cm. D.B.H. BARK.
25549. Pteridophyta. On rock slide in stream, under swift water after a rain. 7700 ft.
25550. Phytolacca. Clearing at 8100 ft; only 2 plants seen.
25551. Physalis. Corolla yellow with black markings. Clearing at 8100 ft.
25552. Cinchona sp. Midrib light red above. Deep wooded canyon at 7600 ft. BARK.
25553. Cinchona sp. Midrib not red. Deep wooded canyon at 7600 ft. BARK.
25554. Quercus. Single tree in clearing, 30 cm. D.B.H. 5700 ft. Q. humboldtii
25555. Rynchospora. Grassy mountainside, 7600 ft.
25556. Gramineae. Culms tufted; spikelets brown. Grassy mountainside at 7600 ft.
25557. Eriocaulaceae. Grassy mountainside at 7600 ft.

SANTANDER DEPARTMENT

July 31. Headwaters of Q. Chima, in mountains west of Chima
10 25558. Ladenbergia magnifolia (fide Fosberg). Leaves very pale red or green in veins; capsule splitting from below; flowers white. Edge of clearing at 5300 ft. Park & twigs pickled for morphological study; BARK.
3 25559. Leonurus. Flowers purple. Land pastured by hogs, about 5000 ft.
1 25560. Habenaria. Flowers green. Grasslands at 6500 ft.

August 1. San Antonio, in drainage of Q. Chima west of Chima.
5 25561. Ladenbergia. Tree 12 cm. D.B.H. Wet woods at 7800 ft. Bark and twigs pickled for morphological study.
1 25562. Habenaria. Flowers green with whitish spur. Grassland, 7000 ft.
1 25563. Ladenbergia. Forest at 7200 ft.
1 25564. Orchidaceae. Flower yellow with red-brown stripes. Forested ridge, 8000 ft.
1 25565. Orchidaceae. Flowers yellow; lip with a scarlet spot. Forested ridge, 8000 ft.
1 25566. Orchidaceae. Flowers crimson. Forested ridge, 8000 ft.
4 25567. Orchidaceae. Stem with crimson glutinous spots; flowers lemon-yellow, the column spotted with crimson. Forested ridge, 8000 ft.
1 25568. Orchidaceae. Flowers yellow; lip with a crimson spot. Forested ridge, 8000 ft.
3 25569. Gramineae. Culms 4 m. long; only a few dwarfed inflorescences not over-ripw. Shrubby sub-paramo, 8300 ft.
1 25570. Basidiolichen? Blue-green color. On bases of rotting treestrunks at 8200 ft.
1 25571. Basidiolichen? Blue-green color. On bases of rotting tree-trunks at 8200 ft.
1 25572. Basidiolichen? Blue-green color. On bases of rotting tree-trunks at 8200 ft.
1 25573. Cladonia. Among dwarfed trees on ridge at 8200 ft.
3 25574. Pteridophyte. On trunks of dwarfed trees on ridge at 8200 ft.
7 25575. Chusquea. In dense thicket at 7000 ft.

& Pan de Azucar

August 2. Near San Antonio, drainage of Q. Chima, mountains W. of Chima.
7 25577. Ladenbergia ~~magnifolia~~. Veins with little or no red pigment; in bud but flowers apparently white. Edge of forest at 6800 ft. Bark & twigs pickled for morphological work; BARK
7 25578. Cinchona pubescens. Leaves with red veins; flowers red. Edge of forest at 6800 ft. Bark & twigs pickled for morphological study; BARK.
5 25579. Manihot. Cultivated on north slope of San Antonio, about 6800 ft.
4 25580. Anaphalis? In cultivated land, north slope of San Antonio, about 6800 ft.
1 25581. Habenaria. ~~Habenaria~~. Corolla yellowish-white. South slope of Pan de Azucar, 6400 ft.

SANTANDER DEPARTMENT

August 3. Mountains west of Chima, valley of Quebrada Chima.
25582. Corolla nearly white. Grassy hillside, 4800 ft. Habenaria.
25583. Phytolacca. Only 2 plants, along trail. About 4500 ft.

August 4. Weeds in patio, Cinchona Mission office, Bucaramanga
25584. Bidens
25585. Eragrostis. Between paving blockd E. amabilis
25586. Euphorbia. Between paving blocks
25587. ~~Euphorbia~~ ageratum

August 11. Path to El Carmen, 20 km. W. of San Vicente de Chucuri
25588. Jussiaea? Flowers yellow; roots spreading and with long white outgrowths whose tips float on the surface. Shallow water, Quebrada de los Indios.
25589. Rubiaceae. Woods along Rio oponcito. Alt. 1000 ft.
25590. Phytolacca. Along path near Rio Oponcito.

August 12. El Carmen region, SW. of S. Vicente de Chucuri.
25591. Rubiaceae. Small tree; flowers white, fragrant. Alt. 2000 ft. Bocconia
Bark & twigs pickled for morphological study.
25592. Remijia pedunculata. Tree 14 cm. D.B.H. Cerro de Quinol. Alt. 2600 ft. STIPULES, BARK 2.0 TCA, 0 QS.
25593. Remijia pedunculata. Tree 8 cm. D.B.H. Cerro de Quinol, Alt. 2600 ft. STIPULES, BARK 2.7 TCA, 3.2 QS.
25594. Remijia pedunculata. Tree 15 cm. D.B.H. STIPULES, BARK 2.4.TCA, 2.9 QS.
25595. Phytolacca. Along path.

August 13. El Carmen region, SW. of S. Vicente er Chucuri
25596. Ladenbergia magnifolia. Tree 30 cm. D.B.H.; flowers white; petioles and veins brown. BARK.

August 18. Sidewalk at wall of houses. and street, Oiba.
25597. Galinsoga
25598. Galinsoga

BOYACA DEPARTMENT

August 20. Roadside noth of Moniquira. Alt. 7200 ft.
25599. Ranunculus.

August 20. El Cidro, near Q. el Pato, valley of Rio Pomera. 11 km. SE. of Moniquira
25600. Agrostis. Rock lefges in stream-bed.
25601. Panicum. Rock ledges in stream-bed.
25602. Paspalum. Rock ledges in stream-bed.
25603. Paspalum. Rock ledges in stream-bed.
25604. Carhophyllaceae. Hanging over rock ledge. Drymaria
25605. Hypericum. Roadside.
25606. Erechtites. Folwers rose-color. Roadside.

BOYACA DEPARTMENT

25607. Orchidaceae. Flowers pink. Rock cliff of road-cut.
25608. Orchidaceae. Flowers nearly white. Rock cliff of road-cut.
25609. Orchidaceae. Flowers deep pink. Rock cliff of road-cut.
25610. Orchidaceae. Flowers pink. Rock cliff of road-cut.
25611. Gramineae. Forming stiff sod. Pennisetum clandestinum
25612. Trifolium. Roadside.
25613. Leersia? Shallow water of roadside ditch.
25614. Hieracium. Path-side.
25632. Juncus. Grassy place.
25615. Lycopodium. Rock cliff of road-cut.
25616. Orchidaceae. Some flowers shite, others yellow, in same inflorescence. Rock cliff of roadside.
25617. Cyperus. Roadside ditch.
25618. Commelina. Flowers blue. Roadside.
24619. Tillaea. Muddy roadside ditch.
25620. Medicago. Roadside. Trifolium
25621. Oxalis. Flowers yellow. Rocky road-cut.
25622. Sisyrinchium. Flowers blue. Roadside.
25623. Cyperus. Roadside ditch.

August 20. In saturated Sphagnum overlying sand, La Cumbre, drainage of RioPomera, 14 km. NW. of Arcabuco. 8000 ft.

25634. Utricularia. Flowers purple.
25625. Utricularia. Flowers yellow.
85626. Lycopodium
25627. Rynchospora
25628. Xyris. Flowers white
25629. Eriocaulaceae. Large compact clump mixed with Sphagnum.
25630. Eleocharis
25631. Xyris. Flowers yellow.
25632. (See after #25614)

August 20. Canyon of Rio Pomera, 11 km. NW. of Arcabuco. 8600 ft.

25633. Eriocaulaceae. Wet roadside at foot of cliff
25634. Sisyrinchium. Flowers yellow. Grassy roadside
25635. Orchidaceae. Sepals red at base and on tails, yellow in middle; petals yellow. Mossy cliffs.
25636. Utricularia. Upper sepal metalic purple, lower sepal greenish-yellow; petals pastel purple, throat yellow, spur white. In Sphagnum on perpendicular road-cut.

August 20. North end of canyon of Rio Pomera, near top of cliff, 13 km. NW. of Arcanuco. 9200 ft.

25637. Lycopodium. Trailing over cliff.
25638. Lycopodium, Trailing over cliff.
25639. Eleocharis. Roadside ditch.
25640. Sisyrinchium. Flowers yellow. Grassy roadside.
25641. Juncus. Moist bank.
25642. Hypericum. Roadside.
25643. Juncus. Roadside.
86544. Eleocharis. Shallow water of roadside ditch.
25645. Sisyrinchium. Roadside
25646. Lycopodium. Roak cut.
25647. Juncus. Roadside ditch.
25648. Juncus. Roadside ditch.

BOYACA DEPARTMENT

August 20. 6 km. NW. of Arcabuco, on savanah.
25649. Lycopodium. Hanging over bank, road-cut.

August 20. Canyon of Rio Pomera, 10 km. NW. of Arcabuco
25650. Cinchona pubescens.

CUNDINAMARCA DEPARTMENT

August 27. Vereda de Rozo, Sabana de Bogota, 4 km. S. of Cota, 30 km. NW. of Bogota

25651. Rumex. Weed in cultivated land
25652. Rumex. Fence-row.
25653. Artemisia? Plant fragrant. Weed in cultivated land.
25654. Spergula. Weed in corn field.
25655. Lepidium. Weed in corn field
25656. Polygonaceae. Stem and old leaves red;,flowers rose; green leaves with a red blotch. Weed in corn field.
25657. Polygonum. Flowers rose; leaves with a red blotch. Weed in corn field.
25658. Polygonaceae. Same as #25656, but dark red. Weed in corn field
25659. Oenothera. Leaves green, turning dark red in age; petals yellowish green, turning orange. Weed in corn field.
25660. Liliaceae. Sepals orange-yellow with 3 green lined; petals orange-yellow with 3 very slender green lines. Weed in corn field.
25661. Leontodon. Flowers bright yellow. Weed in corn field.
25662. Lychnis? Flowers light pink of white; inflorescence with short-stalked glands and long glistning hairs. Weed in corn field.
25663. Viola arvensis. Flowers cream-yellow. Weed in corn field and fence-row,
25664. Primulaceae? Corolla deep blue, dark red at base; filaments dark red; anthers yellow. Among grass, fence-row.
25665. Oenothera, same as 25659. Among grass, fence-row.
25666. Primulaceae?, same as #25664. Filaments white at base, purple above. Weed in corn field.
25667. Oxalis. Flowers yellow. Moist edge of earth dam.
25668. Polygonum. Stem, bracts, ocreae, and rachis of inflorescence dark red; flowers green at base and white toward tip. Moist spot under tree in pasture.
25669. Prunus. Tree in farm-yard.
25670. Jussiaea? Stems prostrate, rooting at nodes; petals yellow. Wet places.
25671. Veronica. Flowers white. Revently flooded irrigation ditch.
25672. Gnaphalium? Slightly fragrant. Roadside.
25673. Gnaphalium? Slightly fragrant. Roadside.
25674. Compositae. Weed in corn fields.
25675. Alnus. Fence-row near irrigation ditch.

August 27. Mule patch in Eucalyptus grove. foot of Cerro de Guadalupe, above Calle 4, Bogota

25676. Plantago
25677. Ranunculus. Petals pale greenish yellow with yellow scale. Making a close mat in a wet place.
25678. Ulex. Flowers yellow.
25679. Veronica.

CUNDINAMARCA DEPARTMENT

August 26. Bought in flower store in Bogota.

25680. Bromeliaceae? "Langostos" Flower with 2 inner bracts; petianth of 3 lance-linear magenta-rose separatesegments; stamens 6, long, hypogenous; anthers linear, basifixed; ovary superior, 3 celled, with numerous axial ovuled; stigmas capitate on long style.

SANTANDER DEPARTMENT

September 5. Headwaters of Q. Chiriviti, W. of Galan

25681. Ladenbergia. Small tree in thicket left on burned hillside. 8300 ft.

25682. Viola. Flowers blue. Burned and cleared hillside, 8200 ft.

25683. , Liliaceae. Flowers pale lilac. Burned and cleared hillside, 8200 ft.

25684. Lycopodium. Burned and cleared hil side, 8200 ft.

25685. Liliaceae, same as #25683. Flowers blue. Burned and cleared hillside. 8100 ft. Eccremis coarctata

25686. Liliaceae, same as #25683. Flowers pale lilac. Burned and cleared hillsied. 8100 ft. Eccremis coarctata

25687. Cyperaceae. Burned and cleared hillside, 7200 ft.

25688. Cladonia. Burned and cleared hillside, about 8050 ft.

25789. Cladonia. Burned and cleared hillside, about 8050 ft.

25690. Cladonia. Burned and cleared hillside, about 8050 ft.

26591. Cladonia. Burned and cleared hillside, about 8050 ft.

25692. Lichen. Thicket, 8300 ft.

25683. adenbergia. Flowers white. Dense forest. 8300 ft.

25694. Ladenbergia? Flowers (seen on another tree which could not be reached because of density of vegetation) white. Shrubby paramo near summit of ridge. About 9500 ft.

25695. Compositae. Flowers yellow. Cleared and burned hillside. About 8200 ft.

25696. Rhododendron? (but petals appear separate) Flowers deep pinl; shrub 1 m. tall. Burned and cleared hillside. About 8000 ft. Befaria

25697. Orchidaceae. Flowers orange or purple-red. Burned and cleared hillside. About 8000 ft.

25698. Hypericum. Sbrub less than 1 m. tall; flowers yellow. Burned and cleared hillside. About 8000 ft.

25699. Ericaceae. Shrub about 1 m. tall; flowers white. Shrub-paramo. 9000 ft.

25700. Loranthaceae. Leaves pale green; peduncles and fruit yellowish; flowers red. Shrub-paramo. 9000 ft.

25701. Morning Shrub 1 m. tall; flowers dark blue; fruit red. Shrub-paramo. 9000 ft.

25702. Ericaceae. Shrub 1 m. tall; flowers white. Shrub-paramo. 9000 ft.

25703. Usnea. Shrub-paramol 9000 ft.

25704. Ericaceae. Shrub 1 m. tall; bracts red. Shrub-paramo. 9000 ft. Pernettya

25705. Loranthaceae. Same as #25700. Shrub-paramo. 9000 ft.

25706. Shrub 1 m. tall; flowers white. Shrub-paramo. 9000 ft.

25707. Orchidaceae. Epiphytic. Shrub-paramo. 9000 ft,

25708 Orchidaceae? Epiphytic, oendant. Shrub-paramo. 9000 ft.

25709. Cladonia. Shrub-paramo. 9000 ft.

25710. Cladonia. Shrub-paramo. 9000 ft.

25711. Shrub-paramo. 9000 ft.

25712. Bromeliaceae. Bracts red. Shrub-paramo. 9000 ft.

SANTANDER DEPARTMENT

September 6. Finca "Berlin", headwaters of Q. Chiriviti, west of Galan

25113. Cinchona officinalis. Tree about 6 cm. D.B.H. Only tree seen in the region. Edge of forest. 6500 ft.
25714. Caryophyllaceae. In molasses grass pasture. 6700 ft.
25715. Galium. Fruit orange. Molasses grass pasture. 6700 ft.

September 7. Finca "Berlin", headwaters of Q. Chiriviti, west of Galan. Alt. 6500-7000 ft.

25716. Cinchona sp. Densely forested mountain-side.
25717
25718.

September 8. "El Retiro", in Cerro el Guiche, headwaters of Q. Chiriviti, west of Galan.

25719. Rubiaceae. Inflorescence axillary. Steep heavily forested mountain-side. 8400 ft. Macrocnemum
25720. Rubiaceae. Inflorescence axillary. Steep heavily forested mountain-side. 8400 ft. BARK
25721. Ericaceae. Bracts red; flowers pink and white. Shrub-paramo at summit. 8900 ft. Gaultheria
25722. Orchidaceae. On mossy trunks of shrubs; flowers solid purple; leaves purplish. Shrub-paramo at summit. 8900 ft.
25723. Orchidaceae. Perianth yellow, lip marked with purple-brown; ovary red ish. Shrub-paramo at summit. 8900 ft.
25724, Orchidaceae. Flowers red-purple; inflorescence terminating a naked stem 1 m. long. Shrub-paramo at summit. 8900 ft.
25725. Lycopodium. Sprawling over shrubs, 8500 ft.
25726. Orchidaceae. On tree-trunks. 8600 ft.
25727. Orchidaceae. On trunks of shrubs; ovary and leaves dark red. Shrub-paramo at summit. 8900 ft.
25728. Pteridophyte. Under shrubs in shrub-paramo. 8900 ft. Gleichenia
25729. Loranthaceae. Ovary brownish green; calyx orange. Shrub-paramo at summit. 8900 ft.
25730. Weinmannia Shrub with red flowers. Shrub-paramo at summit. 8900 ft.
25731. Orchidaceae. Like #25723. Shrub-paramo at summit. 8900 ft.
25732. Orchidaceae. On tree-trunk; flowers lemon-yellow.
25733. Orchidaceae. Flowers yellow with orange center. On tree-trunk, shrub-paramo near summit. 8900 ft.

September 9. Pasture, near finca "Berlin", headwaters of Q. Chiriviti, west of Galan. Alt. 6800 ft.

a5734. Daucus.
25735. Sonchus. Growing singly, 1 m. tall; flowers yellow.
25736. Gnaphalium.
25737. Chenopodium.
25738. Erechtites. Flowers purple.

September 9. Wooded mountainside, finca "Berlin", headwaters of Q. Chiriviti, west of Galan. Alt. 7200 ft.

25739. Sanicula.
25740. Pilea Trailing on mossy log.

SANTANDER DEPARTMENT

September 9. Steep forested mountainside above finca "Berlin" in Cerro de Guiche, headwaters of Q. Chiriviti, west of Galan

25741. Orchidaceae. Flowers very pale greenish-white. Clump on trunk of small tree. 7200 ft.
25742. Lichen. "Lama" Branch of tree. 7300 ft.
25743. Sphagnum. Old leaves red. In a dense clump. 7300 ft.
25744. Orchidaceae? Stems 1 m. long, unbranched; bracts red; flowers pink outside, white within except for red lip. 7500 ft.
25745. Cinchona officinalis. Small tree, 2 cm. D.B.H., the only one seen. 7600mft.
25746. Usnea. Old plants red. 7700 ft.

September 9. On mossy tree trunks in rain-forest, Cerro de Guiche, above "El Retiro", headwaters of Q. Chiriviti, west of Galan. Alt. 8100-8800 ft.

25747. Orchidaceae. Corolla lobes purple, tails lighter.
25748. Orchidaceae. Flowers green and reddish.
25749. Orchidaceae. Flowers greenish.
25750. Orchidaceae. Flower pale yellowish, lip spotted with red.
25751. Orchidaceae. Flowers pale yellowish with red spots.
25752. Orchidaceae.
25753. Orchidecese. Flowers pale red.
25754. Orchidaceae.

September 10. Valley of Q. Chiriviti, west of Galan on path to El Carmen.

25755. Polygala. Flowers purple. Dry rocks, about 4000 ft.
25756. Rubiaceae. Corolla tube purple, lobes green. Along pathway near quebrada. Alt. about 4000 ft. Chalarinia corymbosa

September 16. Between Bucaramanga and Socorro.

25757 Calotropis procera
25758
25759 Jatropha gossypiifolia

September 17. South of Socorro

25760 Cardiospermum
25761 Solanum

September 18. 12 km. W. of Jesus Maria. Alt. 7000 ft.

25762. Ladenbergia. Veins of leaves r d.
25763. Viburnum. Shrub 1 m. tall; flowers white; fruit dark blue.

September 19. Roadside Florian

25764. Rorippa. Mass collection . Roadside
25765. Polygonum. Mass collection. Roadside.
25766. Mikania? Climbing tangled vine; flowers white. Thicket along path.
25767. Eupatorium. 1 m. or more tall; flowers white. Thicket along path.

SANTANDER DEPARTMENT

September 20. Gentle slope, cut over 20 years ago, with scattered small trees and stump sprouts, intersected with paths. La Belleza, 10 km. N. of Florian. Alt. 6300 ft.

25768. Cinchona pubescens. Tree 12 cm. D.B.H.; veins red; young leaves pale red. BARK, SEEDS

25769. Cinchona officinalis. Stump sprout 8 cm. D.B.H.; flowers red. SEEDS, BARK 4.3 TCA, 0 QS.

25770. Cinchona officinalis. Stump sprout 8 cm. D.B.H. SEEDS, BARK 3.0 TCA.

25771. Cinchona officinalis. Seedling 3 cm. thick; stipules green when young, red in age.

25772. Cinchona officinalis. Tree 15 cm. D.B.H. Many capsules diseased and aborted. SEEDS, BARK 6.0 TCA, 0.3 QS.

25773. Fungus. On capsules of Cinchona officinalis #25772.

25774. Phytolacca. Mass collection. Clearing and pathway.

September 21. Road southwest from La Belleza to Nuevo Mundo, west of Florian.

25775. Cinchona officinalis. Tree 2 m. tall, 3 cm. D.B.H. 5600 ft.

26776. Phytolacca. Mass collection. Along path 8-14 km. from La Belleza. 2500-5000 ft.

25777. Phytolacca. Mass collection. Clearings, finca "Buenos Aires" 14 km. SW. of La Belleza. Alt. 2500 ft.

September 22. Q, la Quitaz, near Nuevo Mundo, W. of Florian. 850 ft.

25778. Leguminosae. Petals white with pink midrib and light pink near midrib. Alt. 850 ft.

~~25783 25784 Leguminosae, same as #25778 Fruit (labelled #~~

25779. Leguminosae. Same as #25778, fruit. (Labelled 25784)

25780. Cacao. Small tree 3 m. tall. Hillside, 1400 ft.

25781. Cinchona Henleana. Wooded ridge near Buenos Aires. 2500 ft. BARK

September 23. Roadside southwest from La Belleza to Nuevo Mundo, west of Florian. ~~5600 ft~~

25782. Cinchona officinalis. Tree 10 cm. D.B.H., 6 m. tall. SEEDS, BARK 2.8 TCA. Alt. 5600 ft.

25783. Lichen? On Cinchona officinalis #25782.

25784. Cinchona sp. About 500 ft. (#25779 also bears this number)

September 24. NW. of La Belleza. Alt. about 6000 ft.

25785. Rubus. Primocanes branching. On limestone outcrop.

25786. Juncus. Pastured hillside.

25787. Juncus. Pastured hillside.

25788. Ranunculus? Standing water in sink-hole.

25787. Rorippa? Standing water in sink-hole

25790. Cyperus. Standing water in sink-hole.

25791. Cinchona pubescens. Branch 8 cm. in diameter, on trunk 50 cm. D.B.H. About 1 km south of waterfall "La Humadora". BARK 6000 ft.

25792. Cinchona officinalis. Stump sprout 4 m. tall. 5 cm. thick. Residual tree in clearing near waterfall "La Humadora". Alt. 6000 ft. BARK.

25793. Cinchona officinalis . (same) SEEDS, BARK 4.0 TCA.

SANTANDER DEPARTMENT

September 25. East of La Belleza, on trail to Sucre.
25794. Typha. Small shallow pool. Alt. 7650 ft.
25795. Utricularia. Flowers yellow. Small shallow pool, alt. 7650 ft
25796. Callitriche. Small shallow pool. Alt. 7650 ft.
25797. Alga? Light green tufts on trunk of Cinchona pubescens,25789. Wooded hillside. 7500 ft.
25798. Cinchona pubescens. Sprout 15 cm. thick on stump 30 cm. thick. Wooded hillside. 7500 ft. SEEDS, BARK.
25799. Cinchona pubescens. Trunk 30 cm. D.B.H. Wooded hillside, 7500 ft. BARK.
25800. Hypericum. Flowers yellow; fruit red. Rock-cut, pathway about 6 km. E. of La Belleza. Alt. about 6500 ft.
25801. Phytolacca. Intermediate, flowers a little lighter than in form with short inflorescence. Roadside about 4 km. E. of La Belleza. Alt. about 6500 ft.
25802. Phytolacca. Mass collection. Roadside about 4 km. E. of La belleza. Alt. about 6500 ft.

September 26. East of La Belleza, on trail to Sucre.
25803. Apaveraceae. Shrub; juice orange. Alt. 7400 ft. About 6 km. E. of La Belleza. Bocconia
25804. Orchidaceae. Flowers white. About 6 km. E. of La Belleza. Alt. 7400 ft.
25805. Lycopodium. Rock Bank, about 6 km. E. of La Belleza. 7100 ft.
25806. Cinchona pubescens? Leaves shining above, with red veins. Roadside thicket, about 6 km. E. of La belleza. Alt. about 7000 ft.

September 26. "Moravia", level valley east of La Belleza. 7000 ft.
25807. Callitriche. Pool in pasture; terrestrial form on mud.
25808. Callitriche. Pool in pasture; aquatic form in 20 cm. water.
25809. Callitriche. Pool in pasture; subaquatic form at water's edge.
25810. Mimulus. Prostrate; corolla yellow, palate hairy and spotted with light brown. Muddy shore of stream.
25811. Equisetum. Muddy bank of stream.
25812. Cardamine? Muddy bank of stream and shallow water,
25813. Paspalum. Pasture.
25814. Juncus. Mass collection. Pasture.
25815. Flowers yellow. Among tree trunks at edge of stream. Oxalis.
25816. Fragaria. Achenes in pits about ½ the depth of the length of the achene. On hummocks in pastured swamp.
25817. Epilobium. Stem and old leaves red; sepals and ovaries red or green; petals white or pink on the same plant. Among grasses and sedges in pastured swamp.
25818. Juncus. Pastured swamp.
25819. Gramineae. Spikeltes purple. On rotting log in pastured swamp.
25820. Eleocharis. On old log in pool.
25821. Hieracium. Flowers yellow. Cleared woods along path.

September 26. In stream entering sink-hole, about 1.5 km. E. of La Belleza. Alt about 6500 ft.
25822. Mimulus. Prostrate; corolla yellow, palate hairy and spotted with light brown.

SANTANDER DEPARTMENT

September 26. La Belleza; bark sample sumbitted by Miguel Sanchez, probably from same locality as #25782.
25823. Cinchona officinalis. BARK 3.0 TCA, 0 QS.

September 27. La Belleza,
25824. Cinchona pubescens. Trunk about 20 cm. D.B.H. Alt. 6100 ft. Pasture near waterfall "La Humadora." BARK.
25825. Cladonia. On old trunk, N.W. of La Belleza.
September 28. Road from La Belleza to Florian. Alt. about 6000 ft.
25826. Orchidaceae. Flower orange. On fence-post.

September 28. Roadsides E. of Florian.
25827. Malphigiaceae. Prostrate over slate-pile; keys red.
25828. Phytolacca. Intermediate in color, darker than type with long inflorescence and lighter than type with short,

CUNDINAMARCA DEPARTMENT

September 29. Villa Pinzon. Roadside. 8200 ft.
25829. Phytolacca. Flowers light purple; leaves not red.

September 29. Fallow field 38 km. N. of Bogota
25830. Polygonum. Mass collection

October 2. Between Soacha and El Colego, 35 km. W. of Bogota.
25840. Rubus. Stems ascending then arching, recurving to touch ground., 3-4 m. long. Clay bank.
25841. Rubus.
25842. Agrostis. Moss-covered rock-cut.
25843. Cardamine. Wet gully.
25844. Veronica. Flowers purple. Creeping on vertical wet mossy roaf cut.
25845. Equisetum. Clay and gravel roadside.
25846. Hydrocotyle. Creeping on vertical wet mossy roak cut.
25847. Eupatorium. Flowers purple; stems very viscid., Thicket, path to Salto de Tequendama.
25848. Marathrum foeniculaceum - determined by A. Dugand. Foliage bright green; flowers pueple-red. On rocks in Salto de Tequendama. Type locality.
25849. Alga. Filaments dark olive-green, with swollen joints. In shallow water at brink of Salto de Tequendama.
25850. Phytolacca. Stems and petioles red. Mass collection. Path to Salto de Tequendama.

October 6. Cerro de Guadelupe, Bogota. 9500 ft.
25851. Cyperaceae. Roadside ditch.

CUNDINAMARCA DEPARTMENT

October 8. Cerro de Montserrate, Bogota

25852. Lycopodium. Under shrubs, paramo. 10000 ft.

25853. Chusquea. Steep shrubby hillside. 10000 ft.

25864. Aster? Stems shrubby, 1 m. tall; rays purple. 10000 ft. Diplostephium

25855. Lycopodium. Under shrubs, paramo. 10000 ft.

25856. Lycopodium. Under shrubs, paramo. 10000 ft.

25857. Lupinus. Stems creeping; petals purple-blue; standard light purple or white distally. 9500 ft.

25858. Gentianaceae? Corolla lobes light lilac, lined with dark lilac. Mountain crest. 10500 ft.

25859. Lycopodium. Among grass and shrubs, paramo, mountain crest. Alt. 10500 ft.

25860. Aragoa Shrub 1 m. tall; corolla lobes 4, white, hairy at base within; stamens 4; style 1. Paramo, 10500 ft.

25861. Gramineae. Culms purple, in a dense tuft; spikelets nearly black. Dry mountain crest, 10500 ft.

25862. Scrophulariaceae. Whole plant viscid-glandular; calyx purple; corolla lemon-yellow. Among grass and shrubs, paramo, mountain crest. Alt. 10500 ft. Bartsia

25863. Eucalyptus. Twigs and petioles red; fruit blue-glaucous. Mountain crest, 10500 ft.

25864. Scrophulariaceae? Corolla pale lilac and white. Among grass, paramo, mountain crest. 10500 ft. Bartsia

25865. Umbelliferae. Among grass and shrubs. 10500 ft.

25866. Castilleja. Shrub 1.5 m. tall; bracts green

25867. Scrophulariaceae. Calyx dark red; corolla deep red; stamens yellow. Shrubby paramo. 10500 ft.

25868. Oxalis. Stems fleshy, sprawling and climbing among bases of shrubs. Shrubby paramo. 10500 ft.

25869. Oxalis. Stems fleshy, sprawling and climbing among bases of shrubs. Shrubby paramo. 10500 ft.

25870. Plantago. Descicated pathway back of church. 10500 ft.

25871. Plantgo. Descicated pathway back of church. 10500 ft.

25872. Orchidaceae. Corolla yellowish. Srassy paramo. 10500 ft.

25853. Hieracium. Flower yellow. Pathway, 10500 ft.

25874. Orchidaceae. Stems 1 m. long; flowers green, then lemon-yellow. Grassy paramo. 10500 ft.

25875. Compositae. Stems creeping on rocky cliff; flowers lavender. Alt. about 10000 ft.

25876. Lycopodium. Creeping, on shrub paramo. 10000 ft.

25877. Compositae. Flowers yellow; bracts purple-margined. Pastured foot-hills. Alt. about 8900 ft. Hypochaeris

25878. Polygonum. Weed in cultivated land at foot of mountain. Flowers pink. Alt. about 8800 ft.

25879. Liliaceae. Mass collection. All flowers blue. Shrubby paramo. 10000 ft.

25880. Phytolacca. Mass collection. Flowers rose. Roadway along foot of mountain. Alt. about 9000 ft.

CUNDINAMARCA DEPARTMENT

25881. Polygonaceae? Main stem prostrate, branches erect. Cultivated land in foothills. Alt. about 8800 ft.
25882. Cyperaceae. Dry soil. About 9600 ft.
25883. Orchidaceae. Shrub paramo. About 10000 ft.
25884. Paspalum. Rachis and young spikeltes purple. Rocks, paramo. Alt. 10000 ft.
25885. Gramineae. Rocky paramo. 10000 ft.
25886. Lycopodium. Shrubby paramo. 10000 ft.

October 10. Sesquile.
25887. Rumex. Damp ground.
25888. Polygonum. Damp ground.
25889. Polygonum. Damp ground. One clone.

October 10. Choconta
25890. Lupinus. Low prairie between highway and railroad.
25891. Typha. Leaves exceed spikes. Wet ground between highway and railroad.

BOYACA DEPARTMENT

October 10. Monzano, south of Tunja.
25892. Datura. Semi-shrub, 2.5 m. tall. Corolla red distally, yellow proximally. Roadside.

October 10. Tunja.
25893. Leguminosae. Shrub 1.5 m. tall; flowers yellow. Roadsides and eroded fields. *Spartium junceum*

October 11. Salt flats, Paipa.
25894. Juncus.
25895. Scirpus,
25896. Scirpus.
25897. Phytolacca. Mass collection.
25898. Phytolacca. Stem red.
25899. Spergularia?
25900. Juncus.

October 11. Cerinza
25901. Polygonum. Mass collection. Corn field.

October 11. Shrub paramo north of Belan. Alt. 10100 ft.
25902. Lycopodium. Roadside bank.
25903. Lycopodium. Roadside bank.
25904. Ranunculus. Roadside ditch.
25905. Ranunculus. Roadside ditch.
25906. Sisyrinchium. Flowers yellow. Roadside ditch.
25907. Epilobium. Calyx deep pink; corolla pale. Roadside ditch.

BOYACA DEPARTMENT

October 11. Shrub paramo north of Belen

25908. Eupatorium, Stems shrubby; young branches slightly glutinous; flowers purple. Roadside, 10200 ft.

25909. Vaccinium? Forming mats. 102000 ft. Pernettya

October 11. Pool on paramo north of Belen. Alt. 10200 ft.

25910. Tillaea.

25911. Ranunculus. Blades floating.

25912. Elelcharis?

October 11. Sandy soil near Rio Susacon, SW. of Susacon

25913. Compositae. Flowe s white. Hypochaeris

SANTANDER DEPARTMENT

October 12. Alto del Almorzadero, open paramo, north of Cerrito. Alt. 12000 ft.

25914. Cyperaceae? Forming dense mats; fruits stick in flesh.

25915. Lycopodium. In dense mats 50 cm. in diameter.

25916. Callitriche. In 20 cm. of water in pool.

25917. Tillaea. Bright green patches in 15 cm. water of pool.

25918. Callitriche. In about 30 cm. water in pool.

25919. Castilleja. Bracts green, with distal half scarlet; corolla green, orange-tipped. Saturated sod.

25920. Gentiana. Corolla lobes pale lilac with 5-7 dark veins; anthers brown.

25921. Lycopodium. Leaves on uproght stem mostly orange, those on creeping stems green with orange tips.

October 12. Paramo de Jurado, north of Cerrito. Alt. 10600 ft.

25922. Juncus. Roadside ditch.

25923. Rubus. Among rocks and shrubs.

25924. Lycopodium. Among rocks and shrubs.

25925. Juncus. In saturated soil.

25926. Juncus. In saturated soil.

25927. Juncus. In saturated soil.

25928. Rynchospora. In saturated soil.

25929. Eriocaulaceae. In saturated soil. Forming a dense mat 30 cm. in diameter.

NORTE DE SANTANDER DEPARTMENT

October 13. Mountains S. of Rio Chitaga, E. of Bata. Sarare Road.
25930. Melastomaceae. Flowers pink. Alt. 6100 ft.
25931. Pteridium. Alt. 6100 ft.
25932. Callitriche. Mats on damp ground near hut. Alt. 6500 ft.

October 14. Rio Chitaga, Sarare Road near Labeteca. Alt. 4200 ft.
25933. Marathrum (det. Dugand). Rocks in swift water.
25934. Marathrum. On rocks in swift water.
25935. Marathrum. On rocks in swift water.
25936. Tillandsia. On trees overhanging the river.

October 17. Cucuta. Low pasture along Rio Pamplonita. Alt. 700 ft.
25937. Rubiaceae. Shrub 1 m. tall; flowers white,
25938. Cyperus.
25939. Leguminosae. Tree; filaments white toward base, red toward apex. calliandra
25940. Equisetum. Stems 2 m. tall. Roadside ditch.

October 18. Road-cut in shale, Pamplona. Alt 7500 ft.
25941. Galium.

October 19. Paramo SE. of Pamplona, junction of Sarare Road
25942. Juncus bufonius. Roadside ditch.
25943. Taraxacum. Mass collection. Roadside.
25944. Santalaceae. Stem and calyx red; berry waxy white. heath
25945. Orchidaceae.
25946. Juncus.
25947. Xyris. Flowers yellow.
25948. Ranunculus. Flowers yellow.
25949. Liliaceae. Flowere white, orange with age.
25959. Eryngium. paniculatum

October 20. Wooded hillside, Sarare Road E. of Bata. Km. 64. 6500 ft.
25971. Cinchona officinalis. Tree 5 cm. D.B.H. BARK. 4.7 TCA, 1.8 QS
25952. Phytolacca. Mass collection.

October 23. Estate of Don Juan Echeverria, E. of Toledo. 8500 ft.
25953. Cyperaceae. Clearing.
25954. Eleocharis. Clearing. (-55 C. pub. BARK 2.2 TCA
25955. Cinchona pubescens. No herbarium specimen; composite BARK sample from 11 trees. 2.2 TCA
25957. Phytolacca. Mass collection. Clearing. Flowers & stem deep purple.
25958. Epilobium. Clearing.
25959. Birds nest made of lichens.

October 24. Estate of Don Juan Echeverria, E. of ~~Bata~~ Toledo. Patch of forest. 6700 ft.
25960. Cinchona officinalis. Tree 14 cm. D.B.H.; corolla chocolate-purple. BARK. 4.0 TCA, 1.3 QS
25961. Cinchona officinalis. Tree 12 cm. BARK. 4.5 TCA, 1.3 QS
25962. Lichen? On Cinchona officinalis, # 25961.
25963. Cinchona officinalis. Tree 12 cm. D.B.H., previously stripped about 1 m. on one side. BARK. 4.0 TCA, 1.1 QS

NORTE DE SANTANDER DEPARTMENT

October 24. Estate of Don Juan Echeverria.

25964. Mimulus. Corolla yellow, the lip pubescent and spotted with orange. Wet soggy turf. 7600 ft.
25965. Azolla. Rock slide along stream. 7000 ft.
25966. Lolium. Clearing. 8500 ft.
Habenaria. Flowers yellow-green. Pasture. About 8000 ft.

October 25. Estate of Don Juan Echeverria, E, of Toledo

25968. Hypericum. Flowers dark yellow. Damp pasture. 6900 ft.
25969. Ranunculus. Flowers yellow. Damp pasture. 6900 ft.
25870. Cinchona officinalis. Trunk 12 cm. D.B.H. Woods. 6900 ft. 5.7 TCA, 2.0 QS
25971. Cinchona officinalis. Trunk 14 cm. D.B.H. Woods. 6900 ft. 6.2 TCA, 2.7 QS.
25972. Cinchona officinalis. Trunk 12 cm. D.B.H. Woods. 6900 ft. 3.9 TCA, 0.7 QS
25973. Cinchona officinalis. Corolla dark brownish-purple. Lone tree on steep molasses-grass pasture. 6800 ft.
25974. Echinochloa. Springy places in pasture. 6400 ft.

October 27. Roadsides, Toledo. Alt. 5100 ft.

25975. Eleocharis. Wet clay bank.
25976. Eupatoriae. Flowers blue, white in age.
25977. Tagetes. Foliage heavy-scented; flowers orange. Very abundant along roadsides in this region.
25978. Plantago. Clay bank.
25979. Chlorideae. Eleusine indica

October 28. Finca Tapata, near Rio Culaga 20 km. N. of Toledo.

25980. Euphorbia. Red portion of uppermost leaves margined with black. Edge of pathway, Agua Caliente. 9600 ft.

October 28. Finca Tapata, near Rio Culaga 20 km. N. of Toledo

25981. Cinchona officinalis. Wooded hillside, Agua Caliente; a few small trees only. 7400 ft.
25982. Phytolacca. Mass collection along 200 m. of pathway, Agua caliente. 7400 ft.
25983. Melinis. Along path protected from grazing by fense. 6900 ft.
25984. Lycopodium. Rocky pathway, Agua Caliente. 7600 ft.

October 28. La Rancheria, 23 km. N. of Toledo up Rio Culaga

25985. Radicula Nasturtium-aquaticum. In mud near spring.
29586. Radicula Nasturtium-aquaticum. Edge of water.
29587. Radicula Nasturtium-aquaticum. In water of spring.
25988. Phytolacca. Mass collection. Clearing.

NORTE DE SANTANDER DEPARTMENT

October 30. Valley of Rio Culaga N. of Toledo
25989. Phytolacca. Mass collection. Roadside 2.5-4 km. N. of Toledo
25990. Orchidaceae. Inflorescence viscid. Thicket about 12 km. N. of Toledo.
25991. Hypericum. Along pathway about 12 km. N. of Toledo.

October 20. Near Labateca.
25992. Malphigiaceae. Vine clambering over bushes near Rio Chitaga.

SANTANDER DEPARTMENT

October 31. Alto del Almorzado, north of Cerrito. 12500 ft.
25993. Potamogeton. In small pool.
25994. Eleocharis. In small pool.
25995. Juncus. In small pool.
25996. Carex. In small pool.
25997. Valerianaceae.
25998. Ranunculus. Flowers yellow. In small pond near the road.
25999 Juncus. In small pond near the road.

October 31. Capitanejo. Alt. 3950 ft.
26000. Cynodon. Dry roadside near mouth of Rio Servita.

November 5. Between Susucon & Capitanejo. Alt. 4200 ft.
26001. Gramineae. Culms in tufts, 1.5 m. tall. Arid hillside.

NORTE DE SANTANDER DEPARTMENT

November 9. Near Quebrada Cueva, 15 km. N. of Cucutilla in valley of Rio Cucutilla. Alt. 7000 ft.
26002. Orchidaceae. Flowers purple. On boulders along stream.
26003. Orchidaceae. Perianth brown striped with purple. On boulders along stream.
26004. Phytolacca. Mass collection. Flowers bright purple. River gravels.

November 10. Steep wooded mountainside near Q. Cueva, 15. km. N. of Cucutilla in valley of Rio Cucutilla. Alt. 8200 ft.
26005. Cinchona officinalis. Tree 7 cm. D.B.H. Leaves not red. BARK.
26006. Cinchona officinalis. Tree 10 cm. D.B.H. Leaves not red. BARK.
26007. Cinchona officinalis. Leaves not red. BARK.
26008. Cinchona officinalis. Tree 14 cm. D.B.H. Leaves not red. BARK.
26008. Cinchona officinalis. Trunk 17 cm. D.B.H. Leaves not red. BARK.
26010. Gramineae. Wet shaded pathway. Alt. 7000 ft. A feather
26011. Lichens. On tree branches in swamp along stream. Alt. 7000 ft

November 12. "Capira", headwaters of Quebrada Carillo, 10 km. E. of Cucutilla.
26012. Cinchona officinalis. Tree 6 cm. D.B.H. Leaves not red. Alt. 7800 ft. BARK.
26013. Cinchona officinalis. Tree 5 cm. D.B.H. Leaves not red. Alt. 8400 ft. BARK.

NORTE DE SANTANDER DEPARTMENT

26014. Cinchona officinalis. Tree 8 cm. D.B.H. No red leaves. Alt. 8100 ft. BARK
26015. Taraxacum. Mass collections. Pasture. 7500 ft.
26016. Lycopodium. 8100 ft.
26017. Rubiaceae. Leaves purple-red beneath. Alt. about 7000 ft. Leaf bark
26018. Rubiaceae. Youngbtree about 3 m. tall. About 7000 ft.
26019. Rubiaceae. Young tree about 3 m. tall. About 7000 ft.

November 14. Valley of Quebrada Chicagua, north of Arboledas.
26020. Andropogon. Burned mountainside. Alt. 6800 ft.
26021. Orchidaceae. Lip yellow, flushed with orange-red onnupper surface; both sides pf corolla lobes yellow with orange-yellow spots; calyx-lobes yellow with orange-yellow spots inside, red-orange outside, revolute. Rocky ridge. Alt. 7600 ft.

November 15. Woods about Quebrada Cueva, north of Arboledas. 8000 ft.
26022. Cinchona officinalis. Tree 20 cm. D.B.H.; leaves not red. BARK
26023. Cinchona officinalis. Tree 8 cm. D.B.H.; leaves not red. BARK
26024. Cinchona officinalis. Tree 3 cm. D.B.H.; leaves not red. BARK

November 18. Between Salazar and Santiago
26025. Nymphaea. Petals white with green veins. In small pool.

November 19. North of Lourdes, between Gramalote & Sardinata.
26026. Eriocaulaceae. Wet roadside bank. Alt. about 4000 ft.

November 21. "Las Mesas" in valley of Quebrada Playona, between Gramalote and Sardinatas.
26027. Cinchona officinalis. Trunk 15 cm. D.B.H., stripped on one side for 1.5 m. Alt. 6000 ft. BARK
26028. Cinchona officinalis. Trunk 12 cm. D.B.H.; corolla tube red, lobes nearly black. Alt. 6200 ft. BARK
26029. Cinchona officinalis. Trunk ~~8200 ft Alt~~ 8 cm. D.B.H. 6200 ft. BARK
26030. Cinchona officinalis. Trunk 13 cm. D.B.H. Alt. 6000 ft. BARK

November 24. Between Salazar and Santiago.
26034. Nymphaea. In small pool

November 27. Mountains above "Villa Marina," between Pamplona and Bochalema. Alt. 8000 ft.
26031. Cinchona officinalis. Branch 14 cm., from trunk 25 cm. D.B.H. BARK
26032. Cinchona officinalis. Trunk 12 cm. D.B.H. BARK
26033. Cinchona officinalis. Tree 7 cm. D.B.H., 5 m. tall. BARK
26034. (see after 26030)
26035. Phytolacca. Mass collection along trail. Alt. about 6000 ft.
26036. Phytolacca. Mass collection along trail. Alt. about 6000 ft.

NORTE DE SANTANDER DEPARTMENT

November 29. 6 miles north of Pamplona, junction of Sarare Road
26037. Juncus bufonius. Mass collection. Roadside ditch
26038. Phytolacca. Mass collection. Roadside.
26039. Alnus. Mass collection. Small trees bordering road.

November 30. Cordillera de Rio Colorado, km. 55 on Sarare Road, east of Bata
26040. Cinchona officinalis. Tree 5 cm. D.B.H. 5600 ft. BARK
26041. Cinchona officinalis. Trunk 14 cm. D.B.H., stripped for 2 m. BARK
26042. Cinchona officinalis. Trunk 8 cm. D.B.H. 5700 ft. BARK
26043. Cinchona officinalis. Trunk 16 cm. D.B.H. 5600 ft. BARK
26044. Rubiaceae. 5600 ft.
26045. Rubiaceae. 5600 ft.

All the names in this list are provisional only, and none of them are to be regarded as authentic identifications.

DATA FOR LABELS FOR PLANTS COLLECTED BY DREW

IN ECUADOR

1943-1944, F.E.A.

(Numbers E-1 through E-28 were definitely lost in shipping in Ecuador; some others from the Loja region were also lost; but the numbers and data from E-29 on are listed in the hope that eventually some of these missing items may turn up.)

E-29...E-57 from Selva Alegre region, west of Otovalo in the cordillera ~~oriental~~ occidental, in the province of Imbabura.

E-29. Orchid.
Epiphyte to 3 M. Sepals yellow, tipped with yellow-brown, the tips curled; lateral petals pure yellow; lip yellow, purple spotted outside; column purple tipped; no fragrance. In dense, wet forest, near San Pablo, above the Rio Pamplona. Ca. 6000 ft. 11/25/43

E-30. Orchid.
Epiphyte to 2 M. Sepals crimson, fleshy, verrucose on outer surfaces, sulcate within; lateral petals brownish, linear-attenuate; lip crimson, fleshy; no pronounced odor. On small tree at edge of clearing near bark dryer, San Pablo, above Rio Pamplona. ca. 6000 ft. 11/25/43

E-31. Orchid.
Tiny epiphyte. Sepals and petals uniformly reddish brown. In wet forest near San Pablo, above Rio Pamplona. ca, 6000 ft. 11/25/43

E-32. Orchid.
Tiny epiphyte. Sepals, petals, column a uniform cream-yellow. In wet forest near San Pablo, above Rio Pamplona. ca. 6000 ft. 11/25/43

E33. Orchid.
Epiphyte. Sepals, petals and column a uniform cream-yellow. In wet forest near San Pablo, above Rio Pamplona. ca. 6000 ft. 11/25/43

E-34. Gesneriac.
Liana. Leaves green above, purplish beneath; sepals green; petals deep pink. In wet forest near San Pablo, above Rio Pamplona. ca. 6000 ft. 11/25/43

E-35. Rubiac. Palicourea
Tree to 3-4 M. Leaves dark green above, paler beneath; perianth light red; no fruits seen. In wet forest anlong trail near San Pablo, above Rio Pamplona. ca. 6000 ft. 11/25/43

E-36. Orchid.
Epiphyte. Sepals, petals and column white with purplish spots; fragrant. Near San Pablo, in wet forest, above Rio Pamplona. ca. 6000 ft. 11/25/43

E-37. Orchid.
Epiphyte. Sepals, petals and column pinkish-white; highly fragrant. In wet forest near San Pablo, above Rio Pamplona. ca. 6000 ft. 11/25/43

E-38. Bartramia
Common on lower trunks of trees. Wet forest near trail, San Pablo, above Rio Pamplona. ca. 6300 ft. 11/30/43

E-39. Meteoriac.
Pendent in long festoons from lower branches of trees. In wet forest near trail, San Pablo, above Rio Pamplona. ca. 6300 ft. 11/30/43

E-40. Cinchona pitayensis
Small tree to 3 M. Near trail, Cerro Muenala, above Rio Asabi. ca. 9500 ft. 12/3/43

E-41. Orchid.
Epiphyte. Median and lateral sepals purplish red;lateral petals similar; median petal greenish, tipped with purple; slight odor. In wet rainforest, trail, Cerro Muenala, above Rio Asabi. ca.9000 ft. 12/3/43

E-42. Orchid.
Sprawling suffructescent herb up to 2 M. Sepals cream-white, faintly tinged with purple; petals and column cream-white; no odor. In wet forest, Cerro Muenala, above Rio Asabi. ca. 10,000 ft. 12/3/43

E-43. Orchid.
Terrestrial. Lateral sepals pink, reflexed; lateral petals white, reflexed; median petal fringed with purple at base, tipped with yellow; column purple spotted at base; no fragrance. In wet rainforest, Cerro Muenala, above Rio Asabi. ca.9500 ft. 12/3/43

E-44. Guettardia
Tree to 5M. Corolla tube light cerise with pink lobes and the latter with crinkled margins; fragrant. In wet rainforest on Cerro Muenala, above Rio Asabi. ca. 9500 ft. 12/3/43

E-45. Orchid.
Epiphyte to 2 M. Sepals yellow-brown, tipped with golden yellow; lateral petals golden yellow, purplish at base; lip triangular in shape with pronged proximal appendage having 6 points: white, except 2 lateral points which are dark purple; tip of lip reflexed, yellow, purplish at base. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 9500 ft. 12/3/43

E-46. Orchid.
Epiphyte up to 2 M on large trees. Sepals, petals and column uniformly red-purple. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 9500 ft. 12/3/43

E-47. Verbenac.
Shrub, to 2 M. Corollas pale green; no odor. In wet rainforest, Ceroc Muenąla, above Rio Asabi. ca. 9500 ft. 12/3/43

E-48. Orchid.
Terrestrial, common. Sepals white; petals white; lip white with purple spots; no fragrance. In wet dwarf forest, Cerro Muenala, above Rio Asabi. ca. 10,000 ft. 12/3/43

E-49. Orchid.
Terrestrial. Sepals, petals and column straw-colored,rather

E-49. brittle in texture; no fragrance. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43.

E-50. Orchid.
Terrestrial, 16 in. high. Sepals, petals and column rose-purple; leavespurplish beneath; slight fragrance. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43.

E-51. ~~Orchid~~. Balanophy.
Saprophyte, or parasite on roots of tree. Corolla brownish-red, the column white; stem, scale-leaves brownish-white to red brown. On floor of rainforest, Cerro Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43

E-52. Orchid.
Terrestrial, to 18 in. tall. Sepals greensih brown; petals rose-brown; column similar to petals in color; bracts green. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43

E-53. Orchid.
Epiphyte, to 1-2 M. Calyx, corolla and column unifrom dark red brown; perianth papery in texture. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43

E-54. Orchid.
Epiphyte, to 2 M on trees. Bracts brownish; calyx and corolla greenish white; column yellowish white; pubescence of perianth white. No odor. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43

E-55.. Orchid.
Epiphyte, to 1-2 M. Sepals brownsih yellow; lateral petals brownsih yellow; lip yellow; no odor. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43

E-56. Orchid.
Epiphyte, to 2-3M on trees. Sepals, petals and young ovary carmine; thickened, fleshy appendage of lip yellow; no odor. In wet rainforest, Ceroo Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43

E-57. Orchid.
Terrestrial, up to 1 M. Sepals, petals and column white; very fragrant. In wet rainforest, Cerro Muenala, above Rio Asabi. ca. 8500 ft. 12/3/43

Numbers E-58 through E-65 were collected in the Province of Loja.

E-58. Passiflora
Sprawling vine on shrubs. Corolla crimson with pruple corona; leawes shiny green above. On hillside near statue of Virgin, outskirts of city of Loja. ca. 7400 ft. ll 1/27/44

E-59. Rubiac.
Small tree to 2 M. Corollas blue, the pedicels and peduncles yellow. Along Rio Zamora, 5 km. south of Loja. ca. 7300 ft. 1/31/44

E-60. Orchid.
Terrestrial. Sepals whitish, rose tinted outside; lateral petals purple spotted inside; median petal with row of purple dots; column cream color; peduncle purple; no odor. In wet ground, banks of Rio Zamora, 5 km. south of Loja . ca. 7400 ft. 1/31/44.

E-61. Cinchona officinalis L.
Small tree to 3 M.(sprouts). Leaves shiny green above, pale beneath. Variety locally called "uritusinga". On cut-over slopes of Zamora-huaico, 7 km. south of Loja. ca. 7800 ft. 1/31/44.

E-62. Ericad.
Trailing shrub. Flowers pink, fragrant. On soft shales, hillside 1 1/2 km. south of city of Loja, near coal mines. ca. 7400 ft. 1/31/44

E-63. Ericad. Befaria
Shrub. Corollas, styles and filaments rose color; pubescence on underside of leaves rusty brown, on upper surface, whitish. At edge of paramo, between Ona and Cuenca on Panamerican Highway. ca. 10,000 ft. 2/13/44

E-64. Ericad. Befaria
Shrub. Corollas, styles and filaments rose tinted; calyx, pedicels, peduncles rusty brown pubescent; leaves firm, shiny above, pale beneath. At edge of paramo, between Ona and Cuenca on Panamerican Highway. ca. 10,000 ft. 2/13/44

E-65. Proteac.
Tall shrub or small tree, common between 8500-10,000 ft. Corolla yellowish-whitw, not fragrant; leaves glaucous; fruits not seen. (Said to be medicinal; diuretic) Edge of paramo, betwen Ona and Cuehca on Panamerican Highway. ca. 10,000 ft. 2/13/44

Numbers E-66 through E-138 inclusive were collected on a trip to the paramo of Pinan, near the volcano Cotocarchi, and return by way of Irubi, Apuela and Calvario in the Intag Valley. All localities are in the province of Imbabura.

E-66. Passiflora
Petals greenish white; corona whitish; stamen tube purple. Along trail to Pinan between Hacienda Quitumbita and El Hospital. Ca. 8500 ft. 3/7/44

E-67. Orchid.
Epiphyte. Sepals yellow brown; lateral petals very small, purple; column and lip straw colored with purple stripes; fruit soft spiny. In quebradita at edge of paramo, San Miguel. ca.11,000 ft. 3/7/44

E-68.Orchid.
Terrestrial, to 1 M. Sepals and petals yellow green within; sepals purplish outside; column entirely yellow green; slight odor. On trail between El Hospital and San Miguel. ca. 10,000 ft. 3/7/44

E-69. Orchid.
Terrestrial, to 2 ft. Perianth and column uniformly purplish. On cleared land, between El Hospital and San Miguel. ca.9500 ft. 3/7/44

E-70. Composit.
Tall shrub or small tree. Leaves whitish silvery; bracts straw color; perianth light rose. Common in river gravels. In bed of small stream below El Hospital. ca. 7300 ft. 3/7/44

E-71. Orchid.
Epiphyte. Sepals and petals purplish striate; column pruplish. On dwarf tree in quebradita at edge of paramo, San Miguel. ca. 11,000 ft. 3/7/44

E-72. Orchid.
Epiphyte. Sepals attenuate, cross lined with purple stripes; lip and column dark purple. On tree in quebradita at edge of paramo, San Miguel. ca. 11,000 ft. 3/7/44

E-73. Campanulac. ~ a Gent?
Corolla blue. Common in paramo of Pinan, along trail between San Miguel and Pinan. ca. 11,800 ft. 3/8/44

E-74. Campanulac. ~ Gent.?
Petals blue. In paramo of Pinan, along trail between San Miguel and Pinan. ca. 11,000 ft. 3/8/44

E-75. Composit.
Herb with basal rosette. Rays bright orange. In wet paramo between San Miguel and Pinan. ca. 11,000 ft. 3/8/44

E-76. Lupinus
Corollas blue. In paramo of Pinan, between San Miguel and Pinan. ca. 11,000 ft. 3/8/44

E-77. Passiflora
Corolla tube, limbs lilac; stamens and corona deeper purple. At edge of forest, above Pinan. ca. 10,200 ft. 3/9/44

E-78. Lobelia
Petals pale blue-white. In wet paramo above Pinan. ca. 10,600 ft. 3/9/44

E-79. Palicourea
Tall shrub or small tree. Corollas blue; fruits blue. In forest above Pinan. ca. 10,600 ft. 3/9/44

E-80. Sisyrinchium
Petals yellow. Abundant in paramo, near Laguna Pinan. ca. 10,800 ft. 3/9/44

E-81. Composit.
Leaves in basal rosette, white wooly beneath; rays deep cerise; In paramo, near Laguna Pinan. ca. 10,800 ft. 3/9/44

E-82. Bomarea
Sepals red-crimson; petals yellow with purplish spots. In sotobosque and paramo above Pinan. ca. 10,700 ft. 3/9/44

E-83. Paspalum
Leaves whitish hairy; spikelets purplish. Common in paramo above Pinan. ca. 10,700 ft. 3/9/44

E-84. Scrophulariac. Baitaira
Bracts pmrplish red; flowers yellowish. Fairly common in paramo abobove Pinan. ca.10,700 ft. 3/9/44

E-85. Lupinus
Corolläas pure white, otherwise similar to common blue-flowered species. Very rare . In paramo above Pinan, near Laguna Pinan. ca. 10,700 ft. 3/9/44

E-86. Cephaelis
Tall shrub or smallt tree. Corollasbright purple. In wet rainforest below paramo of Pinan. ca.10,200 ft. 3/9/44

E-87. Botrychium
Mare, in paramo of Pinan, above Laguna Pinan. ca.10,800 ft. 3/9/44

E-88.
Shrub. Corollas bright red; no fruits seen. In forest above Pinan. ca, 10,200 ft. 3/9/44

E-89. Orchid.
Epiphytie, or semi-saphophyte. Perianth light yellowish-green, hairy . On mossy rock near stream in wet rainforest. Above Pinan. ca. 10,200 ft. 3/9/44

E-90. Composit.
Plant white wooly; rays purplish tinged. In paramo above Pinan, near Laguna Pinan. ca. 10,750 ft. 3/9/44

E-91. Orchid.
Perianth and coloumn uniformly an olive brown. Fairly common in paramo above Pinan, ca. 10, 450 ft. 3/9/44

E-92. Orchid.
Epiphyte. Sepals, petals and column greenish yellow; no odor. In wet rainforest, above Pinan. ca. 10,200 ft. 3/9/44

E-93. Orchid.
Epiphyte. Sepals, petals straw colored, purplish tinged; column yellowish. In forest above Pinan. ca. 10,200 ft. 3/10/44

E-94. Orchid.
Epiphyte. Sepals, petals, column lemon yellow. In forest abowt Pinan. ca. 10,200 ft. 3/10/44

E-95. Orchid.
Epiphyte. Sepals, petals straw colored; column yellowish; no odor. In rainforest above Pinan. ca. 10,200 ft. 3/10/44

E-96. Orchid.
Epiphyte. Sepals, petals thin, almost cartilaginous, purplish; column purplish. In rainforest above Pinan. ca. 10,200 ft. 3/10/44

E-97. Orchid.
Epiphyte. Sepals, petals yellowish purple; column purplish; leaves dull green. In rainforest above Pinan. ca. 10,200 ft. 3/10/44

E-98. Composit.
Leaves of basal rosette white wooly beneath; bracts purple; rays purplish tinged. In paramo above Pinan. ca. 10,800 ft. 3/12/44

E-99. Habenaria
Perianth greenish.; no odor. In paramo above Laguna Pinan. ca. 10,800 ft. 3/12/44

E-100. Viola
Corollas yellow. Inparamo above Laguna Pinan. ca. 10,800 ft. 3/12/44

E-101. Orchid.
Sepals, petals and column white; slight odor. In paramo above Laguna Pinan. ca. 10,800 ft. 3/12/44

E-102. Composit.
Bracts blackish tipped; rays white. In paramo above Laguna Pinan. ca. 10,800 ft. 3/12/44

E-103. Orchid.
Epiphyte. Perianth, column uniformly purple; no odor. In forest above Laguna Pinan. ca. 10,800 ft. 3/13/44

E-104. Passiflora
Corolla, corona and filaments blue-purple throughout; leaves shiny green above. In forest edge, above Pinan. ca. 10,600 ft. 3/14/44

E-105.
Shrub to 2 M. Corollas yellow. At border of paramo, above Pinan. ca. 10,600 ft. (A local medicinal, called "voleta", usueful for constipation; its properties were not tested.) 3/14/44

E-106. Juncus
In very wet paramo, near Pinan. (Called "Yerba de cienaga"). ca. 10,400 ft. 3/14/44

E-107. Passiflora
Corolla tube orange yellow; corona yellow; limbs greenish. In forest edge, above Laguna Pinan. ca. 10,600 ft. 3/14/44

E-108. Rubiac.
Small tree, 2-4 M. Leaves shiny dark green above; fruits deep blue. In forest edge above Pinan. ca. 10,600 ft. 3/14/44

E-109. Ericac.
Tall shrub or small tree. Corollas cream white or greenish, very fragrant; leaves shiny green. Common near Pinan along trails. ca. 10,400 ft. 3/14/44

E-110. Viola
Petals whitish with light pumplish stripes. In grazed meadow near Pinan. ca. 10,400 ft. 3/14/44

E-111. Bomarea
Perianth orange red. Climbing vine, along trail near Pinan. ca. 10,400 ft. 3/14/44

~~E-108.-Rubiae.~~

E-112. Onagrac.
Sepals reflexed, green;-petals yellowish at base, orange red at tips. At edge of paramo, along trail to Pinan. ca. 10,400 ft. (A medicinal called "platanillo") 3/14/44

E-113.
Shrub to 2 M. Perianth bright yellow. Common, along trail to Pinan, near edge of paramo. ca. 10,400 ft. (Medicinal called "turbata"). 3/14/44

E-114. Hypericac.
Corollas orange. Along trail to Pinan, at edge of paramo. ca. 10,400 ft. 3/14/44

E-115. Valeriana
Corollas white, rsther fragrant. Along trail to Pinan, at edge of paramo. ca. 10,400 ft. 3/14/44

E-116. Lobelia
Petals pale white-lavendar. In wet paramo near Pinan. ca. 10,400 ft. (Medicinal called "palomilla"- used for eye trouble.) 3/14/44

E-117. Composit.
Rays white. Herb common in paramo and below. Near Laguna Pinan. ca. 10, 400 ft. 3/14/44

E-118. Potamogeton
In stream near Laguna Pinan. ca. 10,400 ft. (Medicinal called "Guaminche": a fever cure and diuretic.) 3/14/44

E-119. Campanulac. Gent.
Corollas bluish purple. In paramo near Laguna Pinan. ca. 10,400 ft. 3/14/44

E-120. Rubiac.
Shrub to 2 M. Flowers not found; fruits white. In forest, along trail to Pinan and Irubi. ca. 8500 ft. 3/14/44

E-121. Orchid.
Epihyte. Sepals and later.l petals yellow with dark purple spots; lip fringed, paler yellow; column orange yellow. Common in forest, trail between Pinan and Irubi. ca. 8500 ft. 3/15/44

E-122. Orchid.
Epiphyte. Perianth and column cream white; little odor. In forest, along trail between Pinan and Irubi. ca. 8500 ft. 3/15/44

E-123. Orchid.
Epiphyte. Perianth and columb unifromly rose-purple; no odor. In forest along trail between Pinan and Irubi. ca. 8500 ft. 3/15/44

E-124. Orchid.
Epiphyte. Perianth almost uniformly orange colored; bracts thin, papery and straw colored; orange scented. In forest, along trail between Pinan and Irubi. ca. 8000 ft. 3/15/44

E-125. Orcid.
Srawling, semi-shrubby terrestrial. Perianth pink; tinged with purple; column similar; fragrant. In forest, along trail between Pinan and Irubi. ca. 7500 ft. 3/15/44

E-126. Orchidac.
Epiphyte. Sepals and lateral petals white; lip white at base, purple at tip, but yellow at extreme tip; column white, purple spotted. Common in forest, along trail between Pinan and Irubi. ca. 8000 ft. 3/15/44

E-127. Orchid.
Terrestrial. Perianth and column uniformly white; somewhat fragrant. Fairly common in forest along trail between Pinan and Irubi. ca. 7500-8000 ft. 3/15/44

E-128. Cinchona pubescens ("bofuda")
Large tree, solitary in cleared land. (14 in.x60 ft.) .Along trail between Irubi and Apuela. ca. 6000 ft. 3/16/44

E-129. Orchid.
Epiphyte. Sepals, petals, column greenish yellow; no odor. In forest along trail between Irubi and Apuela. ca. 6500 ft. 3/15/44

E-130. Orchid.
Epiphyte. Sepals, lateral petals carmine; lip and column pink. In forest along trail between Irubi and Apuela. ca. 7000 ft. 3/15/44

E-131. Fuchsia
Shrub to 2 M. Corollas crimson. In forest, along trail between Irubi and Apuela. ca.5500 ft. 3/16/44

E-132. Orchid.
Epiphyte. No flowers found. In forest, along trail between Irubi and Pinan. ca. 7000 ft. 3/16/44

E-133. Solanac.
Shrub to 2 M. Corollas white. In fotest, along trail between Irubi and Apuela. ca. 5500 ft. 3/16/44

E-134. Phytolacc.?
Tall, suffructescent herb of fence-rows. Corollas greenish white; fruits greenish, but probably immature. Trail between Irubi and Apuela. ca. 5500 ft. 3/16/44

E-135. Orchid.
Terrestrial. Calyx, corolla and column yellowish brown. On soil, along Intag trail between Asabi and Muenala. ca.7500 ft. 3/17/44

E-136. Orchid.
Terrestrial. Sepals and lateral petals pink; lip yellowish, purple spotted; column white, pink striped; no odor. On soil, along Intag trail between Asabi and Muenala. ca. 8000 ft. 3/17/44

E-137. Cinchona pitayensis x pubescens
Understory tree. Wet rainforest, Hacienda San Francisco, Tabla Chupa region. ca. 8060 ft. (Possible hybrid between

E-137. C. pitayensis and C. pubescens.) 4/2/44

E-138. Cinchona pitayensis
Understory tree. In wet rainforest, Hacienda San Francisco, Tabla Chupa region. Typical form of area with leaves shiny above, with veins slightly hairy and pinkish beneath. ca. 8600-9200 ft. 4/2/44

(The Tabla Chupa region of Imbabura is approximately southeast of the volcano Cotacarchi and only a few miles-airline- from the Selva Alegre region; both are in the general vicinity of the Intag Valley of Imbabura.)

E-139 Numbers E-139 through E-149 were collected on sa short trip to the Selva Alegre region, in a district called Mina Chupa.

E-139. Orchid.
Terrestrial. Perianth green, the lower sepal reflexed, hairy; column gree also. Along trail from Acupallas to Cambugan. ca. 10,200 ft. 4/27/44

E-140. Piperac.
Epiphyte. Leaves and stem fleshy; inflorescence greenish. In tree at edge of paramo, Aparejos (El Hotel). 4/23/44

E-141. Orchid.
Terrestrial. Bracts pinkish, thin,papery; perianth greenish white; column yellowish; perianth hairy; no odor. In rainforest, Mina Chupa. ca. 10,500 ft. 4/23/44

E-142. Bromeliac.
Epiphyte. Bracts red; bracteoles red; perianth purple; leaves fed tipped. In forest clearing, trail from Aparejos to San Pablo, ca. 2 km from the latter. ca. 10,800 ft. 4/23/44

E-1431 Composit.
Leaves dark green; rays bright blue. Fairly common in paramo above Aparejos. ca. 11,200 ft. 4/23/44

E-144. Orchid.
Epiphyte. Petals greenish with purple stripes; column dark purple with pubescence same color; no odor. In rainforest, near Mina Chupa. ca. 9500 ft. 4/24/44

E-145. Orchid.
Epiphyte. No flowers seen; fruit lined with purple; leaves very thick and turgid. In rainforest, near Mina Chupa. ca.9500 ft. 4/25/44

E-146. Orchid.
Terrestrial. Sepals greenish; bracts green; petals white; leaves green with white spots; no odor. In duff, rainfobest, Mina Chupa. ca. 9500 ft. 4/25/44

E-147. Orchid.
Terrestrial. Perianth and column uniformly purplish. Along trail through rainforest between Aparejos and San Pablo. ca. 10,800 ft. 4/25/44

E-148. Orchid.
Epiphyte. Lateral sepals greenish-brown, crisped; lateral petals same color, crisped, keeled; lip light purple, dark purple spotted; column dark purple; slight odor. On a tree at very edge of paramo, Aparejos (El Hotel). ca. 11,000 ft. 4/25/44

E-149. Orchid.
Epiphyte. Sepals and petals white with purple spots, crisped; lip white at base, otherwise purplish; column darker purple; slight fragrance. In forest, Mina Chupa. ca. 9500 ft. 4/25/44

E-150. Bromeliac.
Epiphyte. Bracts brown; fruits, leaves green. On tree in forest, near San Geronimo, Cayambe ca. 10,400 ft. 5/15/44

~~151~~
E-151. Composit.
Shrub to 3 M. Leaves dark green above, paler beneath. At edge of paramo, Aparejos (El Hotel). ca. 11,100 ft. 4/25/44

The following numbers, E-152 through E-255, were collected on a trip east of Ibarra, Imbabura, to the eastern cordillera beyond the volcano Cayambe.

E-152. Palicourea
Shrub to 3 M. Corollas deep lavender; fruits blue. In dense rainforest near camp, Naranjito. ca. 9650 ft. 5/10/44

E-153. Rubiac.
Small shrub. Corollas white. In wet sphagnum swamp between Rio San Geronimo and Naranjito. ca. 9900 ft. 5/8/44

E-154. Psychotria
Suffructescent herb. Corolla white, orange in bud, with small callus on outer surface of tube at base of each lobe; immature fruit green. In forest, along trail between Toldadas and Naranjito. ca. 10,100 ft. 5/8/44

E-155. Rubiac.
Shrub to 4 M. Corollas deep lavendar. In rainforest along Rio San Pedro. ca. 7600 ft. 5/11/44

E-156. Rubiac.
Small tree. Corollas red-purple; fruits dark red-brown. In rainforest, near Rio La Virgen. ca. 8600 ft. 5/11/44

E-157. ~~Rubiac.~~ Hedyotis
Tree to 3 M. Fruits green. In rainforest near camp, Naranjito. ca. 10,000 ft. 5/11/44

E-158. Arcytophyllum
Shrub to 1 M. Corollas red-purple, lilac scented; leaves dark green, shiny. In paramo NE of Cayambe, trail to Rio Boqueron. ca. 12,000 ft. 5/16/44

E-159. Orchid. Epiphyte. Flowers in bud; lemon-yellow. In dense rainforest, Alegria. ca. 9350 ft. 5/12/44

E-160. Borag.
Corolla sky blue. At edge of trail, in forest near San Gerpnimo. ca. 10,000 ft. 5/8/44

E-161. Begonia
Terrestrial. Flowers red; fruit greenish. In forest near Rio Arturo. ca. 10,600 ft. 5/7/44

E-162. Alchemilla
Corollas yelloe orange. Common in paramo, along trail between Hacienda Pecillo and Laguna San Marcos. ca. 11,500 ft. 5/5/44

E-163. Sapindac. ?
Tree to 3-4 M. Corollas purplish red. Along trail in sphagnum swamp, between Toldadas and Naranjito. ca., 10,100 ft. 5/8/44

E-164. Composit.
Shrub to 1-2 M. Leaves glaucous; bracts purplish; discs yellow. A dominant in Blechnum-Puya Association. Near Laguna San Marcos. ca. 11,100 ft. 5/5/44

E-165. Rubus
Sprawling vine. Corollas red-purple. Along trail near Laguna San Marcos. ca. 11,100 ft. 5/6/44

E-166. Ranunculus
Aquatic or semi-aquatic. Corollas pale yellow. Partially submersed in spring in sandy soil. Along trail between Laguna San Marcos and Rio Boqueron. ca. 11,000 ft. 5/6/44

E-167. Orchid.
Epiphyte or saprophyte. Sepals white with attenuate yellow tips; laterals petals white; lip yellow.; very fragrant. On fallen log in wet sphagnum swamp, Naranjito. ca. 9700 ft. 5/8/44

E-168. Crucifer.
Corlla yellow. An adventitive in yard of Hacienda Pecillo, near Olmedo. ca. 10,300 ft. 5/5/44

E-169. Primulac.
Corolla white; odorless. On wet rocks, in thin soil near waterfall. Alegria. ca. 9700 ft. 5/12/44

E-170. Trichomanes
On soil under shaded cliff. Alegria. ca. 9800 ft. 5/12/44

E-171. Polypodiac.
Under shaded rocks in rainforest. Alegria. ca. 9800 ft. 5/12/44

E-172. Ericac.
Shrub to 2 M. Corolla white. In sphagnum swamp, along trail between Toldadas and Naranjito. ca. 10,000 ft. 5/8/44

E-173. Sapindac. ?
Tree to 5 M. Corollas purplish red. Along trail in sphagnum swamp between Toldadas and naranjito. ca. 10,000 ft. 5/8/44

E-174. Ericac.
Shrub to 3 M. Corolla white; berries light purple. Along trail in spagnum swamp, between Toldadas and Naranjito. ca. 10,500 ft. 5/8/44

E-175. Juncus
In sandy soil, immersed in small spring. Along trail between Laguna San Marcos and Rio Boqueron. ca. 11,000 ft. 5/6/44

E-176. Ericac.
Small shrub. Corollas white; fruits white; leaves very fragrant. On trail through sphagnum swamp between San Geronimo and Naranjito. ca. 9900 ft. 5/8/44

E-177. Ericac.
Prostrate vine. Corolla pinkish white; berries red. Growing over wet sphagnum, along trail between Rio San Geronimo and Naranjito. ca. 9700 ft. 5/7/44

E-178. Umbellif.
Corollas white. ALong trail near Laguna San Marcos. ca. 11,000 ft. 5/6/44

E-179. Ericac.
Semi-shruh. Forming mats over ground, in wet paramo near Laguna San Marcos. ca. 11,000 ft. 5/6/44

E-180. Hypericum
Shrub to 1-2 M. Corollas yellow. Common in Blechnum-Puya Association near Laguna San Marcos. ca. 11,000 ft. 5/6/44

E-181. Ranunculus
Sepals purplish; corolla golden yellow. In swamp, 3-4 km. from Hacienda Pecillo en route toward San Marcos. ca. 11,500 ft. 5/5/44

E-182. Fern
On soil, along trail between Hacienda Pecillo and Laguna San Marcos. ca. 11,500 ft. 5/5/44

E-183. Epilobium
In wet soil of volcanic origin, banks of Rio San Marcos. ca. 11,000 ft. 5/6/44

E-184. Lycopodium
Cones pendent. On dry, rocky hillside, along trail between Toldadas and Naranjito, near Rio Cuzungo. ca. 10,300 ft. 5/8/44

E-185. Geranium
Suffructescent herb. Corolla pinkish. Forming low mats over wet soil, along trail near Laguna San Marcos. ca. 11,000 ft. 5/7/44

E-186. Myrica
Shrub to 2 M. In wet sphagnum swamp, along trail between Rio San Geronimo and Naranjito. ca. 10,000 ft. 5/8/44

E-187. Aster ?
Shrub to 3 M. Rays light lavendar. A dominant in paramo near Laguna San Marcos. ca. 11,000 ft. 5/6/44

E-188. Specimen destroyed by mould.

E-189. Hypericum
Shrub to 3 M. Corollas yellow. Common in paramo, near Laguna San Marcos. ca. 11,000 ft. 5/6/44

E-190. ~~#~~
Shrub to 3 M. Leaves light green beneath. Corollas white; fragrant. In wet sphagnum swamp between Rio San Geronimo and Naranjito. ca. 9900 ft. 5/4/44

E-191. Orchid.
Epiphyte. Perianth yellow-green; lateral sepal bent outward, slightly revolute at tip; no odor. In sphagnum swamp, between Rio San Geronimo and Naranjito . ca. 9900 ft. 5/4/44

E-192. Orchid.
Epiphyte. Corolla purplish; calyx purplish green, lateral sepals flat, pointing outward; no odor. In low forest, between Rio San Geronimo and Naranjito. ca. 10,000 ft. 5/8/44

E-193. Orchid.
Epiphyte. Lateral sepals bent downward; median sepal erect, all light yellow; lateral petals erect, reddish yellow; lip and column same color. In low wet forest, along trail between Rio San Geronimo and Naranjito. ca. 9800 ft. 5/8/44

E-195. ~~Orchid~~.Lycopodium
Common along trail through sphagnum swamp between Rio San Geronimo and Naranjito. ca. 10,000 ft. 5/4/44

E-196. Orchid.
Epiphyte. Perianth dar purple striped, chartaceous. In forest, trail between Rio San Geronimo and Naranjito. ca. 9900 ft. 5/8/44

E-197. Orchid.
Epiphyte. Calyx purple, the median sepal directed outward and downward; petals and column yellowish white; no odor. In wet forest, trail between San Geronimo and Naranjito. ca.9900 ft. 5/15/44

E-198. Bromel.
Epiphyte. Peduncle red; bracts red; perianth yellow; leaves green. On stump in wet swamp forest, along trail between Toldadas and Rio Arturo. ca. 10,000 ft. 5/15/44

E-199. Orchid.
Terrestrial. Sepals straw colored; petals purplish; leaves purplish green below, green above. On mossy face of cliff, quebrada of Rio Arturo. ca. 10,600 ft. 5/15/44

E-200. Orchid.
Terrestrial. Perianth purplish green on outer surface; whitish within; no odor. On rocky wall of quebrada, Rio San Geronimo. ca. 10,300 ft. 5/15/44

E-201. Valeriana
Flowers white, purplish tinged; fragrant. In wet depression,

E-202. Begonia
Epiphyte. Flowers crimson; leaves slightly purplish beneath. On tree, Alegria. ca. 9300 ft. 5/13/44

E-203. Culcitium
Semi-shrub to 2 ft. Bracts white wooly, pruplish tipped; corollas yellowish; leaves dark green, shiny above, white tomentose beneath. In paramo, NE of Cayambe, trail to Rio Boqueron. ca. 11,800 ft. 5/16/44

E-204. Composit.
Shrub to 2-3 ft. Bracts purple tipped; rays lemon yellow; leaves shiny dark green above, white tomentose beneath. In paramo, NE of Cayambe, along trail to Rio Boqueron. ca. 12,000 ft. 5/16/44

E-205. Begonia
Epiphytic vine. Flowers red at base, white at tip. In forest, Alegria. ca. 9300 ft. 5/13/44

E-206. Luzula
Inflorescence blck-purple, nodding. In wet paramo, NE of Cayambe, ca. 12,000 ft. 5/16/44

E-207.
Forming large "pillows" in paramo, NE of Cayambe, along trail to Rio Boqueron. ca. 12,000 ft. 5/16/44

E-208. Lupinus
Petals deep violet; leaves grass green. In paramo, NE of Cayambe, along trail to Rio Boqueron. ca. 12,500 ft. 5/16/44

E-209. Composit.
Bracts green; corollas white; leaves shiny green. Forming mats in pure sand, NE slopes of Cayambe, along trail to Rio Boqueron. ca. 13,000 ft. 5/16/44

E-210. Malvac.
Petals light purple; no odor; leaves velevety hairy, gray-green. Forming clumps in pure sand, NE slopes of Cayambe, along trail to Rio Boqueron. ca. 13,000 ft. 5/16/44

E-211. Composit.
Rays yellow. In pure sand, NE slopes of Cayambe, along trail to Rio Boqueron. ca. 13, 000 ft. 5/16/44

E-212. Bromeliac.
Epiphyte. Peduncle red; bracts, granulate; fruits yellowish green; leaves purple spotted. In dwarf forest, trail between Rio Boqueron and Toldadas. ca. 9800 ft. 5/15/44

E-213. Blechnum
Common tree fern. In wet paramo near Laguna San Marcos. ca. 11,000 ft. 5/15/44

E-214. Orchid.
Terrestrial. Perianth greenish, translucent with purplish stripes; lateral sepals bent forward and downward, lacking purple stripes; spicy fragrant. In wet rainforest, Alegria. ca. 9400 ft. 5/12/44

E-215. Orchid.
Terrestrial. Perianth greenish; lateral petals recurved; In wet rainforest, Alegria. ca. 9800 ft. 5/12/44

E-216. Orchid.
Terrestrial. Perianth and column coral red; slight frangrance; In wet rainforest, trail between Rio San Geronimo and Naranjito. ca. 9600 ft. 5/8/44

E-217. Orchid.
Epiphyte. Sepals purple brown, recurved; lateral petals whitish, recurved; lip white with few dark purple spots; column similar in color; fragrant. On summit of tree fern, 2M. In wet sphagnum swamp, Naranjiot. ca. 9600 ft. 5/8/44

E-218. Orchid.
Epiphyte. Perianth yellowish green; median sepal straight; lateral sepals erect, recurved; lateral petals erect, recurved, hairy; no odor; leaves thivk, fleshy, light green beneath. In low woods, trail between Rio San Geronimo and Naranjito. ca. 10,000 ft. 5/8/44

E-219. Composit.
Shrub, 2-3 M. Leaves shiny dark green, wooly white beneath; bracts yellow-green; corollas whitish. In wet sphagnum swamp, trail between Toldadas and Rio Arturo. ca. 10,000 ft. 5/15/44

E-220. Lycopodium
Erect branches. In wet sphagnum swamp, trail between Toldadas and Rio Arturo. ca. 10,000 ft. 5/15/44

E-221. Melastom.
Tall shrub, 2-3 M. Leaves shiny dark green above, light green beneath; flowers white. In wet sphagnum swamp, trail between Toldadas and Rio Arturo. ca. 10,000 ft. 5/15/44

E-222. Ericac.
Shrub, 1 M. Corollas white; fruit pinkish white; leaves fragrant. In wet sphagnum swamp, trail between Toldadas and Rio Arturo. ca. 10,000 ft. 5/15/44

E223. Ericac.
Shrub, 1 M. Corolla campanulate, reddish green; no odor; fruit white, translucent. In wet sphagnum swamp, trail between Toldadas and Rio Arturo. ca. 10,000 ft. 5/15/44

E-224. Carex.
Leaves gray-green, glaucous; perigynium green; bracts brown, green stiped and margined. Forming stoloniferous mats in very wet swamp, Toldadas. ca. 10,100 ft. 5/15/44

E-225. Lupinus
Corolla violet, white at base; leaves gray-green. Forming small clumps in pure sand, NE slopes of Cayambe. ca. 13,000 ft. 5/16/44

E-226. Draba
Corollas white, fragrant; leaves and fruits grass green. In wet crevice of rock, quebrada, NE slope of Cayambe, trail to Rio Boqueron. ca. 12,000 ft. 5/16/44

E-227. Carex
Inflorescence purple black; leave dull green beneath, shiny above. In wet depressions, forming small rhizomatous clumps. In paramo, NE of Cayambe, along trail to Rio Boqueron. ca. 11,800 ft. 5/16/44

E-228. Bomarea
Perennial herb. Leaves dark purplish green, striate; sepals dull red, petals yellowish green; fruits green; seeds bright red. In burnedover paramo, NE of Cayambe, along trail to Rio Boqueron. (With white tubers) . ca 11,300 ft. 5/16/44

E-229. Valeriana
Dwarf shrub, 1-2 ft. Bracts purplish, white margined; corolla white. In paramo, NE of Cayambe, along trail to Rio Boqueron. ca. 12,000 ft. 5/16/44

E-230. Composit.
Common shrub, 2 M. Bracts brown-orange; corollas orange; In paramo N of Cayambe, along trail to Rio Boqueroh. ca. 12,000 ft. 5/16/44

E-231. Lupinus alopecuroides
Rather rare. Leaves silvery white hairy on both surfaces; spikes silvery white hairy, the corollas deep violet, fragrant. In wet paramo, NE slopes of Cayambe. ca. 13,000 ft. 5/16/44

E-232.
Forming large "pillows" in paramo. On NE slopes of Cayambe, along trail to Rio Boqueron. ca. 12,500-13,000 ft. 5/16/44

E-233. Composit.
Forming large "pillows" in paramo. Bracts green, purple tipped; rays white ; leaves shiny green. On NE slopes of Cayambe, along trail to Rio Boqueron. ca. 12,000 ft. 5/16/44

E-234. Orchid.
Epiphyte. Perianth lemon yellow; fragrance slight. In wet rainforest, Salesipuedes. ca. 7000 ft. 5/10/44

E-235. Polpodiaa.
Pinnae rusty beneath. Pendent epiphyte, wet rainforest, Alegria. ca. 9400 ft. 5/13/44

E-236. Orchid.
Terrestrial. Sepals green, erect; petals white, the median one recurved; no odor; fruit green; leaves shiny above, dull beneath. On rocky wall of quebrada, paramo NE of Cayambe, along trail to Rio Boqueron. ca. 12,500 ft. 5/16/44

E-237.
Tree, to 3 M. Petals white; sepals green. In wet rainforest, Alegria. ca. 9100 ft. 5/13/44

E-238. Gesneriac.
Epiphyte. Corolla tube reddish purple with white throat, and purple spotted limbs. In wet rainforest, Alegria. ca. 9100 ft. 5/13/44

E-239. Orchid.
Epiphyte. Perianth chartaceous, purple striped; lateral petals bent horizontally forward. In wet rainforest, Alegria. ca. 9200 ft. 5/13/44

E-240. Orchid.
High epiphyte. Perianth and column cream white, very fragrant; In wet rainforest, Alegria. ca. 9100 ft. 5/13/44

E-241. Polypodiac.
Pendent epiphyte. In wet rainforest, Alegria. ca. 9300 ft. 5/13/44

E-242. Composit.
Perianth yellow; leaves light green above, white tomentose beneath. In paramo, along trail between Hacienda Pecillo and Laguna San Marcos. ca. 11,500 ft. 5/4/44

E-243. Ladenbergia re. macrocarpa
Tree to 4-5 M. In wet rainforest, Rio San Pedro. ca. 7600 ft. 5/11/44

E-244.
Common shrub. Corolla tube crimson, limbs pale yellow; no odor; mature fruit yellow. In wet sphagnum swamp, along trail between Toldadas and Naranjito. ca. 10,000 ft. 5/8/44

E-245. Orchid.
Terrestrial. Perianthggreenish; lateral sepals horizontal, recurved; median sepal and petals forming closed hood; no odor. In wet rainforest, Naranjito. ca. 9600 ft. 5/9/44

E-246. Orchid.
Epiphyte. Perianth and column whitish green; no odor. Near camp, Alegria. ca. 9650 ft. 5/11/44

E-247. Orchid.
Epiphyte. Laterla sepals keel shaped; lateral petals recurved; median petal erect-all greenish white. In wet rainforest, N Naranjito. ca. 9700 ft. 5/11/44

E-248. Orchid.
Epiphyte. Sepals thick, fleshy, pirplish on outer surfaces, whitish within, the tips dark brown; laterla petals involute, white, fleshy; lip and column white; very fragrant. On top of tree fern- 2 M-, in wet swamp, Naranjito. ca. 9600 ft. 5/8/44

E-249. Polypodiac.
Pendent epiphyte. In wet rainforest, near camp. Alegria. ca. 9700 ft. 5/11/44

E-250. Orchid.
Epiphyte. Perianth crimson; fragrance of fruit of orange. In wet rainforest, Alegria. ca. 9700 ft. 5/10/44

E-251. Orchid.
Epiphyte. Perianth light red-purple; bracts green ; no odor. On recently fallen tree, in wet rainforest, Alegria. ca. 9300 ft. 5/12/44

E-252. Orchid.
Epiphyte. Perianth and column crimson; fragrance of fruit of orange. In wet rainforest, Alegria. ca. 9400 ft. 5/12/44

E-253.
Herb, 1 M. Perianth orange-red; fruit a berry, yellow. Common in forest, Naranjito. ca. 10,000 ft. 5/11/44

E-254. Loricaria
In paramo, trail between Hacienda Pecillo and Laguna San Marcos. ca. 11,500 ft. 5/5/44

E-255. Composit.
Herb to 2 ft. Rays bright red-purple. In wet sphagnum swamp, along trail between Rio Arturo and Toldadas. ca. 10,000 ft. 5/6/44

E-256....E-276 inclusive were collected on a trip to Mariano Acosta and Sigsipamba, Imbabura, in the cordillera oriental. La Floresta is the name given to a region near Sigsipamba.

E-256.
Trailing vine. Corolla tube yellowish to purplish green; calyx light green. On shrubs along trail between Mariano Acosta and Guanopamba. ca. 9500 ft. 6/8/44

E-257. Dioscorea
Vine. Perianth greenish; fruits green. Along trail, El Caramelo. ca. 7800 ft. 6/12/44

E-258. Orchid.
Terrestrial. Sepals and petals regular in symmetry, yellowish with purplish cross-lines; frgrant. On huge boulder, near Rio Blanco, El Corazon. ca.8900 ft. 6/11/44

E-259. Orchid.
Epiphyte. Perianth yellow, but entirely in bud. In wet rainforest, La Floresta. ca. 9300 ft. 6/10/44

E-260. Orchid.
Epiphyte. Sepals red-brown, curled towards axis; lateral petals cream white ; lip yellow; column yellowish with purple spots above; fragrant. In wet rainforest, La Floresta. ca. 9300 ft. 6/10/44

E-261. Orchid.
Epiphyte. Perianth purple, ahiry within; column darkpurple; In wet rainforest, La Floresta. ca. 9000-10,000 ft. 6/10/44

E-262. Orchid.
Epiphyte. Perianth whitish purple, almmst lilac; column white; ovary yellow-green. In wet rainforest, La Floresta. ca. 9300 ft. 6/10/44

E-263. Orchid.
Epiphyte. Sepals, petals ochre to red-ornge in age; column similar in color; no fragrance..In wet rainforest, La Floresta. ca. 9300 ft. 6/10/44

E-264. Orchid.
Epiphyte. Sepals, petals, ecept lip, and column pink to cerise;

E-264. lip whitish toward tip, deep cerise with darker spots below. On fallen-tree in clearing. La Floresta. ca. 9300 ft. 6/10/44

E-265. Passiflora
Vine. Style purple; stigmas green; sepals pinkish white; petals white; corona purplish, the points yellow-tipped. Along trail between El Caramelo and Sigsipamba. ca. 7400 ft. 6/10/44

E-266. Umbellifer.
Corolla pink to cerise; leaves gray-green; along trail in paramo, between Ibarra and Mariano Acosta. ca. 11,700 ft. 6/7/44

E-267. Ranunculus
In wet ditch along trail in paramo, between Ibarra and Mariano Acosta. ca. 11,700 ft. 6/7/44

E-268. Orchid.
Terrestrial. Ovaries green; leaves dark green. In wet rainforest, La Floresta. ca.9000 ft. 6/9/44

E-269. Orchid.
Epiphyte. Perianth lavendar, hairy within; column deep lavendar; fruit green in color. In wet rainforest, La Floresta. ca.8900ft. 6/9/44

E-270. Orchid.
Epiphyte. Sepals greenish brown; laterla petals purple, forming hood over column; lip light lavendar with dark lavendar spots; fragrant. In wet rainforest, La Floresta. ca. 9300 ft. 6/10/44

E-271. Orchid.
Terrestrial. Lateral sepals light chocolate brown; median petal white with dark purplish brown veins; column white; ovary white. On forest floor, rainforest, La Floresta. ca. 9000 ft. 6/10/44

E-272. Orchid.
Epiphyte. Sepals and petals straw colored; column cerise. In wet rainforest, La Floresta. ca. 10,000 ft. 6/10/44

E-273. Psittacanthus
Parasite. Corolla tube crimson; limbs yellow; fruit black. On branch of tree in wet rainforest, La Floresta. ca. 9300 ft. 6/10/44

E-274. Lycopodium
Pendent epiphyte. In wet rainforest, La Floresta. ca. 10,000 ft. 6/9/44

E-275. Stipa
Spikelets purplish tipped. On dry soil along train, west of quebrada of Rio Pisque. ca. 7500 ft. 6/12/44

E-276. Alnus
Tree to 80 ft. In wet soil, along banks of Rio Blamco, 1/2 km. from Sigsipamba. ca. 7300 ft. 6/12/44

E-277.

E- The following numbers, # E-277 through E-283 were collected on a second trip to the Paramo of Pinan, Imbabura, to a region called "Santa Rosa", about 5 km. from Hacienda Pinan.

E-277. Clematis
Vine. Trailing over shrubs in low forest atop ridge, along trail between El Hospital and San Miguel. ca. 10,600 ft. 6/27/44

E-278. Composit.
Shrub to 3 M. Leaves shiny green above, white beneath; bracts light brown; rays yellow. Edge of paramo, San Miguel. ca.11,300 ft. 6/27/44

E-279. Orchid.
Terrestrial. Sepals and lateral petals yellow, purplish at base; lip dark purple, white margined; column dark purple; fragrant. In dense forest, ridge west of camp, Santa Rosa. ca. 10,800 ft. 6/25/44

E-280. Polypodiac.
Epiphyte. In wooded quebrada near camp in paramo, Sanat Rosa. ca. 10,800 ft. 6/23/44

E-281. Epiphyte. Perianth perpendicular to axis, yellowish purple throughout, including column; fruit whitish. In wooded quebrada near camp in paramo, Santa Rosa. ca. 10,800 ft. 6/23/44

E-282. Orchid.
Epiphyte. (Color notes lost ?) In forest between El Hospital and San Miguel. ca. 10,500 ft. 6/20/44

E-283. Orchid.
Terrestrial. In wet rainforest, near Santa Rosa. ca. 9700 ft. 6/23/44

E-284. Bromeliac.
Epiphyte. Bracts pinkish red; corollas greenish yellow; leaves green. In wet rainforest, La Floresta. ca. 9200 ft. 6/9/44 (Out of sequence because numbering of this lot was done after drying, and this plant required a long time to dry.)

Number E-285 was apparently lost between the field and headquarters. Number E-286 through E-288 were collected on a short trip to the western cordillera along the road to Santo Domingo, in the province of Pichincha.

E-286. Orchid.
Terrestrial. Leaves dull green and pale; no flowers seen; At side of highway in paramo. ca. 11,200-11,300 ft. 5/20/44

E-287. Orchid.
Terrestrial, to 2 ft. Leaves dark green above, pale beneath; sepals fleshy, olive green; lateral petals yellowish, strap shaped; median petal convolute around upper part of column; column green; On shaded bank, along highway to Santo Domingo, in paramo, ca. 11,200-11,300 ft. 5/20/44

E-288. Orchid.
Terrestrial. Roots tuberous; leaves dark green above, pale green and silvery beneath with hyaline tissue over large stomata; sepals

E-288. green, the median reflexed; lateral petals green, strap shaped; median petal hooded, erect; column dark purple; no odor. Along highway to Santo Domingo, in paramo. ca.11,800 -11,300 ft. 5/20/44

The following numbers, E-289 through E-302 inclusive, are a miscellaneous lot from expeditions made previously, and which for one reason or another were not numbered with others from the same localities. There are also included some numbers collected by Umberto Yepez, an ecuadorian assistant, on an expedition into the eastern cordillera in Carchi and on which I did not accompany him.

E-289. Melastom.
Shrub to 1 M. Calyx, ovary bright red, almost crimson; petals black purple. In paramo, along trail between Ibarra and Mariano Acosta, Imbabura. ca. 11,700 ft. 6/7/44

E-290. Orchid.
Terrestrial. Sepals greenish white; lateral petals greenish white; lip greenish beneath, red-brown, dull above, bearing within a shiny, brown callus; column white, hairy at base; no odor. Along trail between El Caramelo and Sigsipamba, Imbabura. 6/8/44

E-291. Psittacanthus
Parasite. Corolla tube crimson, limbs yellow; fruit black. In wet rainforest, La Floresta. ca. 9300 ft. (Imbabura) 6/10/44

E-292. Orchid.
Epiphyte. Sepals greenish white, the median revolute; lateral petals greenish white; lip whitish; column green; no odor. In wet rainforest, La Floresta. ca. 9300 ft. 6/9/44

E-293. Orchid.
Epiphyte. Sepals greenish white; dark purple spotted ; lip and column dark purple; no odor. In wet rainforest, a Floresta. ca. 9000 ft. 6/9/44

E-294. Orchid.
Epiphyte. Sepals olive-brown, the median margined with yellow above; lateral petals clear lemon yellow, the margins crisped; lip fleshy, 3-pointed, each lobe or point red-brown, tipped with yellow, the crest whitish, red tipped; column yellow, purplish tipped; fragrant. Along trail in rainforest, below Santa Rosa, 5 km from Hacienda Pinan, Imbabura. ca.10,400 ft. 6/23/44

E-295. Weinmannia
Tree to 5 M. Corollas white; inner bark reddish. In sotobosque, along trail on ridge above camp, paramo of Pinan, Imbabura. (Bark used as tannin; known as "encino".) ca. 11,200 ft. 6/24/44

E-296. Bromeliac.
Epiphyte. ~~In-wooded~~ Bracts red; perianth purple; leaves green. In wooded quebrada near camp, paramo of Pinan, Imbabura. ca. 10,800 ft. 6/25/44

E-297. Orchid.
Epiphyte. Sepals and lateral petasl yellow with red-brown spots; lip yellow with light brown spots near column, crested with yellowish projections; very fragrant. Along forest trail between El Hospital and San Miguel, Imbabura. ca. 10,500 ft. 6/27/44

E-298. Bromeliac.
Terrestrial. Corolla delicate pink; bracts grayish pink. On dry slopes of quebrada, small river 3 km. north of Atuntaqui, Imbabura. ca. 7200 ft. 6/27/44

E-299. Bromeliac.
Terrestrial. Perianth violet; bracts green. Along road to Guallabambilla, 2 km. east of Hacienda Pecillo, Imbabura. ca. 10,300 ft. 6/29/44

E-300. Orchid.
Perianth rose-purple. In wet rainforest, Zone of Fano, in Oriente of Carchi. ca. 7100 ft. coll. U. Yepez . 6/18/44 (Epiphyte)

E-301. Orchid.
Terrestrial. Perianth deep coral red. In wet rainforest, Zone of Sofia, Oriente of Carchi. ca. 11,000 ft. coll. U. Yepez. 6/18/44

E-302. Orchid. ?
Corollas red. In wet rainforest, Zone of Sofia, Oriente of Carchi. ca. 6700 ft. coll. U. Yepez. 6/16/44 (Terrestrial)

The following numbers, E-303 through E-456 inclusive, were collected on an extended expedition to the eastern cordillera almost due East of the volcano Cayambe in Imbabura. The collector was accompanied on this expedition by Dr. Ira L. Wiggins who made a separate collection of his own with a few duplications of the numbers listed herewith.

E-303. Lycopodium
Pendent epiphyte. In low chaparral along trail to Laguna San Marcos, N slopes of Cayambe. ca. 12,800 ft. 7/10/44

E-304. Orchid.
Epiphyte. Perianth yellowish, brittle; column white. On limb of shrub, low chaparral, along trail to Laguna San Marcos, N slopes of Cayambe. ca. 12,800 ft. 7/10/44

E-305. Ranunculus
Leaves whitish hairy; corollas golden yellow. In paramo, along trail to Laguna San Marcos, NW slopes of Cayambe. ca. 13,500 ft. 7/10/44

E-306. Composit.
Acaulescent herb with white ot pin-purple rays; leaves smooth, shiny. Common in paramo, along trail to Laguna San Marcos. ca. 13,500 ft. 7/10/44

E-307. Composit.
Forming small clumps in sand. Rays yellow; leaves dark green. Along trail to Laguna San Marcos, N slopes of Cayambe. ca. 14,000 ft. 7/10/44

E-308. Culcitium
Forming tufts of several plants. Leaves silvery white hairy; inner bracts dark purplish brown. In sand, along trail to Laguna San Marcos, N slope of Cayambe. ca. 14,000 ft. 7/10/44

E-309.
Shrub to 2 M. Leaves, bracts dark glossy green. In paramo, along trail to Laguna San Marcos, NW slopes of Cayambe. ca. 12,500 ft. 7/10/44

E-310.
Pendent epiphyte in low chaparral. Along trail to Laguna San Marcos, N slopes of Cayambe. ca. 12,500 ft. 7/10/44

E-311. Cerastium
Corollas white; leaves gar-green pubescent. In sand, high paramo, along trail to Laguna San Marcos, N slopes of Cayambe. ca. 13,500 ft. 7/10/44

E-312. Solanum
Shrub. Corollas light purple; fruit black. In wet, burned-over paramo, along trail to Rio Boqueron, N slopes of Cayambe. ca. 11,600 ft. 7/11/44

E-313. Lycopodium
Terrestrial. Leaves reddish green. In wet paramo, along trail to Rio Boqueron, N slopes of Cayambe. ca. 11,000 ft. 7/11/44

E-314. Lycopodium
Terrestrial. ~~In-wet~~ Erect, green. In wet paramo, along trail between Rio Boqueron and Rio Arturo. ca. 11,000 ft. 7/11/44

E-315. Meslastom.
Shrub to 3 M. Corolla white; filaments pink; style exserted; leaves revolute, rusty tomentose beneath. Along trail at Rio Arturo. ca. 11,000 ft. 7/11/44

E-316. Ranunculus
Trailing in sand. Corolla light yellow. Along trail at Rio Arturo. ca. 10,800 ft. 7/11/44

E-317. Lycopodium
Erect branches. In wet paramo, along trail between Rio Arturo and Toldadas. ca. 11,000 ft. 7/11/44

E-318.
Petals yellowish, mottled with purple outside; gynostegium yellowish, Vine, along trail between Rio Arturo and Toldadas. ca. 10,500 ft. 7/12/44

E-319. Lycopodium
Erect branches, brick-red. An wet swamp, along trail near Toldadas. ca. 10,150 ft. 7/12/44

E-320. Orchid.
Terrestrial. Perianth white; upper sepal at right angles to axis. In wet swamp, camp on the Equator, due esat of Cayambe. ca. 10,200-10,500 ft. 7/14/44

E-321. Composit.
Shrub to3 M. Rays white; disc purple; leaves white-tomentose beneath, slightly revolute. In chaparral, near camp at Equator, due east of Cayambe. ca. 10,500 ft. 7/14/44

E-322.
Shrub to 2 M. Petals and filaments white; sepals, ovary, bracts and pedicels red; leaves dark above, pale beneath. In chaparral, near Camp Equator, east of Cayambe. ca. 10,500 ft. 7/14/44

E-323. Orchid.
Epiphyte. Perianth pruplish straw-colored with reddish veins. In wet forest near Camp Equator, due east of Cayambe. ca. 10,400 ft. 7/14/44

E-324. Orchid.
Epiphyte. Sepals translucent, red-purple, parallel to axis; lateral petals darker red-purple; column and median petal adnate, same color as petals. In chaparral, near Camp Equator, due east of Cayambe. ca. 10,400 ft 7/14/44

E-325. Orchid.
Epiphyte. Clowers parallel to bracts; perianth translucent, greenish white; lateral petals at right angels to axis; quite fragrant. On low stump in chaparral, near Camp Equator, due east of Cayambe. ca. 10,400 ft. 7/14/44

E-326. Orchid.
Epiphyte. Perianth and column cream white; ovary pale green or purplish; fragrant. In chaparral, near Camp Equator, due east of Cayambe. ca. 10,400 ft. 7/14/44

E-327. Orchid.
Terrestrial, to almost 1 M. Sepals hairy outside, bright yellow; petals yellow, smooth, the upper forming a hood over column; fruit green, the ribs pale. In chaparral, near Camp Equator, due east of Cayambe. ca. 10,400 ft. 7/15/44

E-328. Orchid.
Epiphyte. Sepals greenish purple outside, pale green within; lateral petals slightly revolute, same color as sepals; lip adnate to column, green with purple dots toward column; ovary purplish green; strong, unpleasant odor. In chaparral near Camp Equator, due east of Cayambe. ca. 10,650 ft. 7/15/44

E-329. Orchid.
Epiphyte. Sepals and lateral petals blackish purple, the petals fused to form a hood over column; lip greenish, adnate to greenish column. In chaparral, near Camp Equator, due east of Cayambe. ca. 11,450 ft. 7/16/44

E-330. Lycopodium
Erect branches; green. On wet, nearly bare volcanic rocks, below Camp Equator, due east of Cayambe. ca. 10,400 ft. 7/16/44

E-331. Lycopodium
Terrestrial, erect or reclining branches; pale green. Above Camp Equator in chaparral, due east of Cayambe. ca. 11,500 ft. 7/17/44

E-332. Orchid.
Epiphyte. Sepals slightly hairy, pale greenish with reddish specks the upper two lance-linear, lower cucullate-saccate; lateral petals filiform, the lower fused with slender androgynophore; lip

E-332. (continued). reddish, appendage on upper side, pale cream and tinged with red on trilobed tip. In chaparral, above Camp Equator, due east of Cayambe. ca. 11,500 ft. 7/17/44

E-333. Polytrichum
On basaltic rocks, below Camp Equator, due east of Cayambe. ca. 10,400 ft. 7/17/44

E-334. Lycopodium
Pendent epiphyte. In chaparral above Camp Equator, due east of Cayambe. ca. 11,700 ft. 7/17/44

E-325. Orchid.
Terrestrial. Perianth green, the lateral petals forming hood over minute, yellowish column. In wet soil, below Camp Equator, due east of Cayambe. ca. 11,100 ft. 7/18/44

E-336. Gaultheria
Shrub to about 2 M. Leaves pale beneath; corolla scarlet, with whitish scales on outside; pedicels and styles, anfd fruiting calyx scarlet. In chaparral, above Camp Equator, due east of Cayambe. ca. 11,200 ft. 7/18/44

E-337. Lycopodium
Pendent epiphyte. Stem often pinkish. In chaparral, above Camp Equator, due east of Cayambe. ca. 11,150 ft. 7/18/44

E-338.
Shrub, 2 M. Leaves yellowish white tomentose beneath; calyx peduncle, pedicels and stipules white-scurfy pubescent; corollas orange. In s wamp, along trail to Camp Arenillas, east of Cayambe. ca. 10,200 ft. 7/20/44

E-339. Bromeliac.
Epiphyte. bracts bright red; corollas yellow; leaves green. In wet rainforest, Camp Arenillas, eastof Cayambe. ca. 10,400 ft. 7/21/44

E-340. Orchid.
Epiphyte. Sepals beige at base, slightly paler at apex; lateral petals similar to sepals in size and color; median petal adnate to column at base. In wet rainforest, Camp Arenillas, east of Cayambe. ca. 10,400 ft. 7/21/44

E-341. Bomarea
Vine. Perianth crimson. In wet rainforest, trail to Camp Arellan. ca. 9200-10,000 ft. 7/21/44

E-342. Orchid.
Terrestrial. Sepals green, the upper hooded; lip and column whitish. In wet rainforest, Camp Arenillas. ca. 10,450 ft. 7/21/44

E-343. Orchid.
Epiphyte. Leaves revolute, soft, purplish beneath; lateral sepals linear-attenuate, pink; median sepal ovate, pink; lateral petals linear, greenish purple; lip bilobed, greenish purple; column purplish. In wet rainforest, Camp Arenillas, east of Cayambe. ca. 10,450 ft. 7/21/44

E-344. Lycopodium
Pendent epiphyte; leaves dark green. In wet rainforest, along trail to Camp Arellan. ca. 10,300 ft. 7/21/44

E-345. Orchid.
Epiphyte. Sepals greenish, purplish tinged; lateral petals reflexed, light purplish green; median petal adnate to column, light yellow green, partly enclosing column at base; column green below, purplish above; bracts green-purple margined. In wet rainforest, Camp Arenillas. ca. 10,200 ft. 7/21/44

E-346. Orchid.
Epiphyte. Sepals translucent purplish; lateral petals slightly reflexed, purplish tipped; lip and column cream colored. In wet rainforest, along trail to Camp Arellan. ca. 10,000 ft. 7/21/44

E-347. Orchid.
Epiphyte. Leaves light purple beneath; sepals translucent, maroon in center, yellowish on margins; petals and column maroon; fruit green-purple, purple-ribbed. In w et rainforest, trail to Camp Arellan. ca. 9700-10,000 ft. 7/21/44

E-348. Orchid.
Epiphyte. Sepals pointing forward, dark purple with green midvein, margins and tips; lateral petals small, aciculate, same color as sepals; lip adnate to column, dark purple within at base, green-tipped and margined; column greenish white at base, purple-ringed at tip. In wet rainforest, along trail to Camp Arellan. ca. 9700-10,000 ft. 7/21/44

E-349. Orchid.
Epiphyte. Sepals greenish white, reflexed; lateral petals same color, reflexed; median petal adnate to column, forming hood; column light green. In wet rainforest along trail to Camp Arellan, ca. 9300-9600 ft. 7/21/44

E-350. Orchid.
Epiphyte. Perianth deep pink, yellowish at base; fragrant. In wet rainforest, Camp Arellan. ca. 9000 ft. 7/21/44

E-351.
Tree to 2 M. Perianth greenish white; ripe fruit light purple. In wet rainforest, Camp Arellan. ca. 9250 ft. 7/21/44

E-352. Melastom.
Small understory tree to 5 M. Fruits holly red. In wet rainf forest, Camp Arellan. ca. 9250 ft. 7/21/44

E-353. Orchid.
Epiphyte. Leaves, stems dark green; perianth light coral red; sepals translucent; column the same. In wet rainforest, trail to Camp Arellan. ca. 9700-10,000 ft. 7/21/44

E-354. Bomarea
Vine. Sepals orange red with green tips; petals orange yellow below, with green tips; ovary green, minutely white papillate. In wet rainforest, trail to Camp Arellan. ca.10,200 ft. 7/21/44

E-355. Orchid.
Terrestrial. Sepals green, reflexed; median petal and column tawny rusty; veins raised on upper surface of leaf; leaf pale green beneaty, the margins crisped. In wet rainforest, along trail to Camp Arellan. ca. 10,000 ft. 7/21/44

E-356. Orchid.
Epiphyte. No flowers; fruit dark purple-green, greenish ribs. In wet rainforest, trail to Camp Arellan. ca. 10,200 ft. 7/21/44

E-357. Orchid.
Epiphyte. No flowers found. In wet rainforest, near Camp Arellan, ca. 10,400 ft. 7/21/44

E-358. Orchid.
Epiphyte. Sepals translucent, straw color; petals and column cerise. In wet rainforest, trail to Camp Arellan. ca. 10,000 ft. 7/21/44

E-359. Melastom.
Liana. Petals yellowish green, reflexed, green cucullate; filaments greenish white; anthers pale cream white; calyx reddish; hairs purplish at base. In wet rainfo rest, Camp Arellan. ca. 9250 ft. 7/21/44

E-360. Orchid.
Epiphyte to 2 M. Perianth and column cream color; median petal hooded over column; fruit whitish tuberculate. In wet rainforest, along trail to Camp Arellan. ca. 9700-10,000 ft. 7/21/44

E-361. Orchid.
Epiphyte. Leaves light purple beneath, dark green above; perianth bright violet; fruits green. In wet rainforest, along trail, to Camp Arellan. ca. 9700-10,000 ft. 7/21/44

E-362. Orchid.
Epiphyte. Sepals translucent, pa le cream color; lateral petals slightly reflexed, tinged with purple; column and lip cream color. In wet rainforest, along trail belwo Camp Arellan. ca. 9700 ft. 7/21/44

E-363. Orchid.
Epiphyte. Perianth spathe like, deep pink, yellowish at base. In we wet ra nforest, along trail below Camp Arellan. ca. 8500 ft. 7/22/44

E-364. Orchid.
Epiphyte to 2½ M long. Sepals thick, pale greenish; median petal pale green, partially surrounding purplish column; lateral petals pale green, reflexed. In wet rainforest, along trail at Camp Arenillas. ca. 10,450 ft. 7/21/44

E-365. Bromeliac.
Epiphyte. Leaves pale green, purplish tinged; inflorescence 1 M long; peduncle, pedicels, bracts, perianth and ovaries lemon yellow. In wet rainforest, Camp Arellan. ca. 9250 ft. 7/22/44

E-366. Lobeliac.?
Liana with milky latex coagulating on exposure into rubber-like substance. Calyx lobes green; ovary reddish; corolla greenish red; style and stigmas green; leaves pale beneath. In wet rainforest, abo ve Camp Arellan. ca. 9400 ft. 7/22/44

E-367.
Tree to 25 M. Calyx green; corolla white; sepals caducous, sub-cucullate at tips; fruits brown with white seeds. In wet rainforest, Camp Arellan. ca. 9200 ft. 7/22/44

E-368.
Tree of overstory, to 35 M. Bark corrugated, gray-brown; leaves dark above, pale beneath; fruits capsulae, brown; no flowers. In wet rainforest, Camp Arellan. ca. 9250 ft. 7/22/44

E-369. Lycopodium
Pendent epiphyte. In wet rainforest, Camp Arellan. ca. 9250 ft. 7/22/44

E-370. Lobeliac.?
Woody liana. Corolla crimson, green-tipped; leaves pale beneath; latex on exposure oxidizing to rubber-like substance. In wet rainforest, Camp Arellan. ca. 9250 ft. 7/22/44

E-371.
Liana. Bracts brown below, yellowish green at tips; corollas deep lavendar; styles pale lavendar, as also the staminal tubes; leaves pale beneath. In wet rainforest, Laguna de la Virgen. ca. 8750 ft. 7/24/44

E-372. Orchid.
Epiphyte. Sepals light purplish; lateral petals almost white, slightly purpling in age; median petal greenish white; column white; leaves pale green. In wet rainforest, Agua Caliente. ca. 7000 ft. 7/25/44

E-373. Scroph.
Herb to 2 ft. Bracts red-brown; tips of corolla tube and limbs same color, but most of tube lemon yellow; petioles red. In wet rainforest, Agua Caliente. ca. 6700 ft. 7/25/44

E-374.
Liana. Calyx pale green; corolla purplish below, the tips pale green, reflexed; leaves pale green with reddish veins above, pale green veins beneath. In wet rainforest, trail from Laguna de la Virgen to Agua Caliente. ca. 8100 ft. 7/25/44

E-375.
Epiphyte. Leaves purple tipped; sepals brownish purple, nearly translucent; petals reduced to points, ochre colored, like the column. In wet rainforest, trail from Laguna de la Virgen, to ~~ca. Laguna de~~ Agua Caliente. ca. 8300 ft. 7/25/44

E-376.
Pendent epiphyte. Fronds rusty hairy beneath, on rachis and pinnae. In wet rainforest, above Laguna de la Virgen. ca. 8900 ft. 7/25/44

E-377. Orchid.
Terrestrial. Bases of sepals, petals, ovaries and bracts brown; tips of sepals and petals pinkish white; leaves pale green below, light green above. In wet rainforest, Agua Caliente. ca. 7000 ft. 7/25/44

E-378. Orchid.
Epiphyte. Sepals greenish white, faintly purplish tinged, slightly revolute; lateral petals linear, greenish white; lip and column greenish white; bracts purplish green; faint odor of green cucumbers. In wet rainforest, along trail between Laguna de la Virgen and Agua Caliente. ca. 8500 ft. 7/25/44

E-379.
Herb to 1 M. Pedicels, calyx and bracts cerise; corollas light red, styles and filaments also; anthers gray-purple; fruits brownish; nodes of stem purplish. In wet rainforest, Agua Caliente. ca. 7000 ft. 7/25/44

E-380. Orchid.
Epiphyte, 1 M long. Laterla sepals green, with chocolate brown tips, slightly revolute; lateral petals same color as sepals, linear attenuate; lip chocolate brown, reflexed; column green. In wet rainforest, Agua Caliente. ca. 7000 ft. 7/25/44

E-381. Lycopodium
Pendent epiphyte. Leaves dark green. In wet rainforest, Laguna de la Vigen. ca. 8750 ft. 7/25/44

E-382. Orchid.
Epiphyte. Sepals attenuate, tips slightly reflexed; petals much reduced; column and petals dark claret red. In wet rainforest, Laguna de la Virgen. ca. 8750 ft. 7/25/44

E-383. Myrica
Tree to 3 M. Fruits green, wax-covered. Lakeside, Laguna de la Virgen. ca. 8750 ft. 7/26/44

E-384. Orchid.
Epiphyte. Sepals translucent, straw colored with purple spots; petals linear purplish; column straw-colored; slight odor. In wet rainforest, Laguna de la Virgen. 8750 ft. 7/26/44

E-385.
Tree to 6 M. Fruits soft tuberculate, yellow-green; seeds bright ~~red~~ coral red; branchlets light brown, pubescent; no flowers. In wet rainforest, Laguna de la Virgen. ca. 8750 ft. 7/26/44

E-386.
Tree to 25 M. in overstory. Corolla white (4 petals); filaments; leaves dark glossy green above, pale dull green beneath. In wet rainforest, Laguna de la Virgen. ca. 8750 ft. 7/26/44

E-387. Orchid.
Epiphyte. Flowers not seen; fruits light green. In wet rainforest, Laguna de la Virgen. ca. 8750 ft. 7/26/44

E-388. Hymenophyllac.
Pendent epiphyte. In wet rainforest, Laguna de la Virgen. ca. 8750 ft. 7/26/44

E-389. Orchid.
Epiphyte. Sepals translucent, straw-colored with faint purplish tinge at base; petals reduced; corolla and column greenish. In wet rainforest, along trail to Laguna de la Virgen. ca. 8850 ft. 7/27/44

E-390. Orchid.
Epiphyte. Sepals long attenuate, white; petals and column cream white. In wet rainforest, trail between Laguna de la Virgen and Camp Arenillas. ca. 8850 ft. 7/27/44

E-391. Bromeliac.
Epiphyte. Bracts, leaves green; perianth white. In wet rainforest, along trail between Laguna de la Virgen and Camp Arenillas. ca. 8850 ft. 7/27/44

E-392. Orchid.
Epiphyte. Leaves with purple veins above, covered with short whitish hairs; pale green beneath; 2 upper sepals greenish white, fringed with hairs; median sepal greenish, reddish toward tip; petals reduced, orange-red; column red. In wet rainforest, along trail between Laguna de la Virgen and Camp Arenillas. ca. 9100 ft. 7/27/44

E-393. Orchid.
Perianth greenish white; fruits dark green. Epiphyte to 1 M long. In wet rainforest, along trail between Laguna de la Virgen and Camp Arenillas. ca. 10,100 ft. 7/27/44

E-394.
Herb to 1 M. Flowering calyx light purple, hairy; fruiting calyx whitish, purple ribbed; petals deep purple, reflexed at tips. In wet rainforest, along trail to Camp Arenillass. ca. 9100 ft. 7/27/44

E-395. Orchid.
Epiphyte. Perianth and column faintly pink; very fragrant. Below Camp Arenillas, in wet rainforest. ca. 10,300 ft. 7/28/44

E-396. Gram.
Tall grass to 2 M., forming extensive community. Trail above Camp Equator, in sub-paramo. ca. 11,750 ft. 7/28/44

E-397. Polypodiac.
On rocks. Near Camp Equator, due east of Cayambe, ca. 11,400 ft. 7/28/44

E-398. Hepatic.
Epiphyte. On dwarfed tree of paramo, Camp Sphagnum, 1 km. W of Llanacocha. ca. 11,400 ft. 7/28/44

E-399. Musci
Epiphytic. On dwarfed tree of paramo, Camp Sphagnum, 1 km. W of LLanacocha. ca. 11,400 ft. 7/28/44

E-4000

Pistillate spikelets pedicellate. In wet swamp, along trail between Camp Arenillas and Sphagnum. ca. 10,100 ft. 7/28/44

E-401. Ranunculus

Procumbent herb; petals light yellow. On wet boggy slope, along trail between Camp Arenillas and Sphagnum. ca. 10,900 ft. 7/28/44

E-402. Lycopodium

Erect epiphyte. Along trail just below Camp Arenillas. ca. 10,300 ft. 7/28/44

E-403. Borag.

Corollas lavendar to bright blue; fragrant. In wet Sphagnum, near Camp Sphagnum. ca. 11,400 ft. 7/28/44

E-404. Orchid.

Epiphyte. Perianth light purple, in bud; fruits tuberculate & with white tubercules, otherwise yellowish green. On fallen log, along trail at N end of LLanacocha. ca. 11,100 ft. 7/28/44

E-405.

Epiphytic, on dwarf tree. In sub-paramo, Camp Sphagnum. ca. 11,400 ft. 7/28/44

E-406. Orchid.

Epiphyte on tree fern. Sepals purplish on outside, greenish within; lateral petals same color as sepals; lip and column green; slight fragrance. Along trail in paramo between Camps 1 and 2, Toldadas. ca. 10,500 ft. 7/29/44

E-407. Lycopodium on

Partly climbing/low shrub; cones erect. Along trail in paramo, between Camps 1 and 2, Toldadas. ca. 10,300 ft. 7/29/44

E-408. Orchid.

Epiphyte. No flowers; fruits greenish. Along trail between Camps 1 and 2, Toldadas. ca. 10,700 ft. 7/29/44

E-409. Orchid.

Epiphyte. Sepals translucent, whitish; petals and column same color; fruit and leaves green. Along trail between Camps 1 and 2, Toldadas. ca. 10,700 ft. 7/29/44

E-410. Lycopodium

Cones erect. Along trail between Camps 1 and 2, Toldadas. ca. 10,700 ft. 7/29/44

E-411. Alchemilla

Erect suffructescent herb. In sand, near Laguna San Marcos. ca. 11,150 ft. 7/30/44

E-412. Luzula

Spikelets dark puplish black, pendent. In sand, playas of Laguna San Marcos. ca. 11,250 ft. 7/30/44

E-413. Corolla deep magenta; leaves light purple beneath; procumbent. In sand, near Laguna San Marcos. ca. 11,250 ft. 7/30/44

E-414. Polypodiac. ?
Erect or pendent. On rocks, Rio Arturo. ca. 11,000 ft. 7/30/44

E-415. Composit.

Erect herb. Disc yellow; rays light magenta; bracts more red-purple; leaves slightly revolute. In wet sand, near Laguna San Marcos. ca. 11,200 ft. 7/30/44

E-416. Ranunculus
In sand, playa of Laguna San Marcos. ca. 11,150 ft. 7/30/44

E-417.
Erect herb. Corollas magenta; calyx more purplish. Near Laguna San Marcos. ca. 11,250 ft. 7/30/44

E-418. Composit.
Perennial or biennial. Taproot deep; bracts green; rays light yellow. Near Laguna San Marcos. ca. 11,200 ft. 7/30/44

E-419. Composit.
Erect herb. Stems leaves and bracts purplish; disc yellow; no rays. In sand, playa of Laguna San Marcos. ca. 11,150 ft. 7/30/44

E-420. Composit.
Erect herb. Leaves shiny above; bratts green; disc yellow. Near river, Rio Boqueron. ca. 10,750 ft. 7/30/44

E-421. Composit.
Shrub 2-3 M. Rays white, disc yellow; leaves white tomentose beneath. ca. 11,250 ft. Near Laguna San Marcos. 7/31/44

E-422.
Tree of sotobosque to 7 M. Involucre dark purple-black; leaves arachnoid tomentose beneath and silvery stellate. ca. 11,250 ft. 7/31/44

E-423.
Shrub to 3 M. Leaves white beneath; dark glossy greeb above; berries yellow-green. Near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-424.
Fragrant shrub, 1½ M. Leaves dark green above, white tomentose beneath; bracts white tomentose in centers, purple margined; corollas dark purple. ca. 11,250 ft. Near Laguna San Marcos. 7/31/44

E-425.
Epiphytic bryophyte. Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-426. Lycopodium
Erect, green. Near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-427.
Forming mats, often intermixed with Azorella sps. Corollas sky blue; leaves pale green. Near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-428. Gram.
Tall bunch-grass with reddish ~~brown~~ purple spikelets, whitish hairy. Near Laguna San Marcos, in sand. ca. 11,200 ft. 7/31/44

E-429. Luzula
Spikelets dark brown. Near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-430 Gram.
Tall bunch-grass, 1-1½ M. Spikelets dark purple-brown at bases, straw color at tips. In sand, near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-431. Carex
Spikelets ~~purplish-black~~. light brown. In sand above playa, near Laguna San Marcos. ca. 11,150 ft. 7/31/44

E-432.
Spikelets purplish. In crevices of rocks and gravelly sand. Near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-433. Azorella
Forming mats or rounded "pillows". Corollas greenish white; fruits green. Near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-434.
Viny herb. Petals whitish. Trailing over bushes. Above Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-435. Composit.
Forming rosettes and producing stolons. Disc greenish white; outer bracts dark brown, inner ones whitish. On san, near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-436.
Petals light magenta; sepals dark magenta. Near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-437. Composit.
Shrub to 1½ M. Leaves dark glossy green above, pale beneath; bracts yellow-green below, dark purple-brown at tips; rays light yellow, as in disc. In sand, near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-438. Pernettya
Common shrub. Corollas white; calyx lobes and pedicels tinged with red; ripe fruit purple-black; leaves dark green above. In sand, near Laguna San Marcos. ca. 11,250 ft. 7/31/44

E-439. Jamesonia
Pinnae shiny green, dark brown beneath; midrib rusty hairy. In wet paramo, N slopes of Cayambe. ca. 12,000-13,000 ft. 8/1/44

E-440.
Forming small clumps; no flowers found. In sand, N slopes of Cayambe. ca. 14,000-ft. 8/1/44

E-441.
Forming small clumps in sand. no flowers seens. Fruits green-purple. On N slopes of Cayambe. ca. 14,300 ft. 8/1/44

E-442.
Leaves dark green, dull, pinkish at base; fruits reddish, the bracts purplish green. In sand, N slopes of Cayambe. ca. 14,500 ft/. 8/1/44

E-443. Valeriana
Forming large "pillows". Leavs light green; bracts and calyces light lavendar with whitish margins; corollas lavendar within at base, white toward tips. In sand, N slopes of Cayambe. ca. 14,300 ft. 8/1/44

E-444. Castillejia
Leaves and bracts green at base, dark purple at tip; flowering bracts crimson; corollas green; fruits light green. In sand, N slopes of Cayambe. ca. 14,300 ft. 8/1/44

E-445. Culcitium
Leaves silvery white-hairy; bracts dark purple-black; disc dark yellowish brown. In sand, N slopes of Cayambe. ca.14,500 ft. 8/1/44

E-446.
In straggly mats. Leaves shiny green, glutinous; bracts similar in color, also glutinous, the upper ones purplish tinged; disc whitish. On sand, N slopes of Cayambe. ca, 14,500 ft. 8/1/44

E-447. Orchid.
Fresh flowers not seen. In sand, N slopes of Cayambe, ca. 14,300 ft. 8/1/44

E-448. Draba
Leaves gray-green to purplish, stellate pubescent; sepals purple; petals white; pods greenish purple, hairy. In sand, solitary, N slopes of Cayambe. ca. 14,300 ft. 8/1/44

E-44 9. Ranunculus
Corollas light yellow. In sand, N slopes of Cayambe. ca. 14,300 ft. 8/1/44

E-450. Erigeron ?
Solitary herb. Outer bracts dark purple, hairy, greenish below; inner bracts green; rays white. In sand, N slopes of Cayambe. ca. 14,300 ft. 8/1/44

E-451.
In small clumps. Corollas pale sky blue. In sand, N slopes of Cayambe. ca. 14,350 ft. 8/1/44

E-452. Composit.
Forming mats. Bracts green, purplish tipped; disc light yellow-green. In sand, N slopes of Cayambe. ca. 14,350 ft. 8/1/44

E-453.
Viny herb. Leaves white tomentose beneath, silky arachnoid above; bracts and bractlets yellow-green; disc light yellow. In small quebrada, NW slopes of Cayambe. ca. 12,600 ft. 8/1/44

E-454. Lycopodium
Erect, terrestrail. Stems and leaves brick-red. On N slopes of Cayambe. ca. 13,000 ft. 8/1/44

E-455. Lupinus alopeccuroides
Perennial herb. Leaves and spikes silvery white-hairy flowers deep lavendar, the inflorescence to 4 ft. in length. In wet depression, NE slopes of Cayambe. ca. 13,000 ft. 8/1/44

E-456. Silene ?
Solitary in sand. Peduncle tomentose; calyx green with purplish veins; no petals found. On N slopes of Cayambe. ca. 14,300 ft. 8/1/44

Numbers E-457 through E-464 are a miscellaneous lot from different regions, as given for each separate number.

E-457. Orchid.
Terrestrial. Perianth purplish, tinged with black; very fragrant. Near San Sebundoy, Carchi. ca. 6500 ft. coll. U. Yepez 7/28/44

E-458. Orchid.
Epiphytic. Corollas yellow. In forests, Zone of Sofia, Carchi. ca. 8700 ft. coll. U. Yepez. 7/19/44

E-459. Orchid.
Epiphyte. Perianth cream color to yellowish. In forest, Zone of Sofia. ca. 8750 ft. coll. U. Yepez. 7/20/44

E-460. Terrestrial. Perianth reddish . In forest, Zone of Sofia, Carchi. ca. 7700 ft. coll. U. Yepez. 7/28/44

E-461. Orchid. Carchi.
Epiphyte. Calyx yellow; petals white. In forest, Zone of Sofia. ca. 8700 ft. coll. U. Yepez. 7/19/44

E-462. Orchid.
Epiphyte. Perianth orange in color; no fragrance. In forest, Zone of Sofia. ca. 7750 ft. coll. U. Yepez. 7/15/44
Carchi

E-463. Composit.
Shrub to 2 ft. Bracts yellow-green; disc yellow. In paramo, along Panamerican Highway, nearly due East of Chimborazo. ca. 11,400 ft. 8/7/44

E-464. Bromeliac.
Epiphyte. Leaves green, mottled magenta at tips; bracts purplish straw-colored; peduncle green; bractlets dark brown, scurfy white outside; perianth white. On Cedrela, in Parque Alameda, Quito, Pichincha. ca. 9250 ft. 8/15/44.

Numbers E-465 through E-498 were collected on a trip to northern Carchi, Ecuador, and the adjacent province of Narino, Colombia, 8/16/44 through 8/18/44.

E-465. Orchid.
Terrestrial. Perianth white; bracts thin, papery brown; leaves light green; no odor. Near higway, El Angel- Tulcan, Carchi. In paramo. ca. 11,200 ft. 8/16/44

E-466. Azorella
Cushion or "pillow" plant. Corollas yellow-green. In paramo, near higway, between El Angel and Tulcan, Carchi. ca. 11,200 ft. 8/16/44

E-467. Orchid.
Terrestrial. Perianth deep pink to white. Near volcanic hot springs, across Rio Chiles from Tufino, in Narino, Colombia. ca. 10,750 ft. 8/17/44

E-468. Lycopodium
In paramo along higway, between El Angel and Tulcan, Carchi. ca. 12,000 ft. 8/16/44

E-469. Potamogeton
In stream near higway, in paramo between El Angel and Tulcan, Carchi. ca. 12,000 ft. 8/16/44

E-470. Ranunculus
Petals pale yellow above, deep yellow beneath; dark brown-purple. In swale in paramo, E slopes of Volcan de Chiles, above Tufino, Carchi. ca. 11,500 ft. 8/17/44

E-471. Juncus
In wet swale, in paramo, E slopes of Volcan de Chiles, near Tufino, Carchi. ca. 11,500 ft. 8/17/44

E-472. Juncus
In wet swale of paramo, E slopes of Volcan de Chiles, above Tufino, Carchi. ca. 11,500 ft. 8/17/44

E-473. Eleocharis
In wet swale of paramo, E slopes of Volcan de Chiles, above Tufino, Carchi. ca. 11,500 ft. 8/17/44

E-474. Ranunculus
Immersed and floating in pool, wet swale, in paramo, E slopes of Volcan de Chiles, above Tufino, Carchi. ca.11,300 ft. 8/17/44

E-475. Juncus
In wet swale of paramo, E slopes of Volcan de Chiles, above Tufino, Carchi. ca. 11,300 ft. 8/17/44

E-476. Arcytophyllum caespitosum
In paramo, E slopes of Volcan de Chiles, above Tufino, Carchi. ca. 11,500 ft. 8/17/44

E-477. Hypericum
Small shrub, 1-2 ft. Corollas pale orange-yellow; leaves pale green. In paramo, E slopes of Volcan de Chiles, above Tufino, Carchi. ca. 11,250 ft. 8/17/44

E-478. Composit.
Liana. Leaves shiny dark green above, rusty tomentose beneath; rays lilac to white. In paramo, sprawling over shrubs, E slopes of Volcan de Chiles, above Tufino, Carchi. ca. 10,750 ft. 8/17/44

E-479. Neckera
Epiphytie. In low shrub, near Rio Chiles, across river in Colombia, Narino, from Tufino, Carchi, Ecuador. ca. 10,750 ft.
8/17/44

E-480. Geum
Corollas yellow. In wet shaded spot, near volcanic hot springs. Rio Chiles, Colombia, acroos river from Tufino, Carchi, Ecuador. ca. 10,750 ft..
8/17/44

E-481. Convolvulac.
Climbing parasitic vine. Calyx, ovary dark purple; corolla white-margined, light purple in center. On tall shrubs, near Rio Chiles, Narino, Colombia, across river from Tufino, Carchi, Ecuador. ca. 10,750 ft.
8/17/44

E-482. Orchid.
Terrestrial. Sepals olive-green, revolute; median petal whitish green lined; lateral petals green-white; column green. In wet volcanic soil near hot springs, Rio Chiles, Colombia (Narino), across river from Tufino, Carchi, Ecuador. ca. 10,750 ft.
8/17/44

E-483. Puya
Terrestrial. Flowering spike to nearly 3 M; perianth prussian blue. In paramo, NE of Tulcan, Carchi, along highway to El Pun. ca. 11,060 ft.
8/18/44

E-484. Rubus
Flowers not seens; fruits deep red, very acid. Trailing over shrubs in paramo, NE of Tulcan, Carchi, along highway to El Pun. ca. 11,000 ft.
8/18/44

E-485. Espeletia
Trunks to 15 ft.; rays light yellow; disc brown. In paramo, NE of Tulcan, Carchi, along higway to El Pun. ca. 11,500 ft.
8/18/44

E-486. Orchid.
Terrestrial. Sepals green; petals purplish green; median petal yellowish white, but purplish green outside. In paramo, NE of Tulcan, Carchi, along highway to El Pun. ca. 11,100 ft.
8/18/44

E-487. Polypodiac. ?
Epiphyte. Sori light yellow-brown. In paramo, NE of Tulcan, along highway to El Pun. ca. 11,000 ft.
8/18/44

E-488. Lycopodium
In paramo, NE of Tulcan, Carchi, along highway to El Pun. ca. 11,000 ft.
8/18/44

E-489..Lycopodium
In paramo, NE of Tulcan, Carchi, alohg highway to El Pun. ca. 11,ooo ft.
8/18/44

E-490. Lycopodium
In paramo, NE of Tulcan, Carchi, along higway to El Pun.ca.11,000 ft.
8/18/44

E-491. Carex
Perigynia tawny brown, breen-margined; leaves light green. Dry roadside swale, road between San Gabriel and Bolivar, Carchi. ca. 9500 ft. 8/18/44

E-492. Orchid.
Sepals and petals deep lavendar; lip lighter colored, yellowish within; column brownish; slight fragrance. In dry quebrada, near Bolivar, Carchi. ca. 9000 ft. 8/18/44

E-493. Orchid.
Terrestrial. Sepals, petals yellowish white; column deep flesh color. In dry quebrada, near Bolivar, Carchi. ca. 9000ft. (Perhaps distinct from # E-492) 8/18/44

E-494. Alnus
Small tree to 3 M. Near pool of water in otherwise dry quebrada, near Bolivar, Carchi. ca. 9000 ft. 8/18/44

E-495. Paspalum
Leaves light gray-green; spikelets light green; rachis green-purple. Dry roadside, along higway between San Gabriel and Bolivar, Carchi. ca. 9500 ft. 8/18/44

E-496. Soliva anthemidifolia
Acaulescent. On roadside bank, along higway between Tulcan and San Gabriel. ca. 9500 ft. 8/18/44

E-497. Orchid.
Terrestrial. Sepals green, white tipped; petals white; column brown. In dry swale, roadside between San Gabriel and Bolivar, Carchi. ca. 9500 ft. 8/18/44

E-498. Solanum muricatum
Large herb. Growing in shade of bahanas. Corollas lavendar; leaves dark green; fruit when ripe light green to white with a few light purple stripes. Roadside plantation between Chota and Juncal, Imbabura. Common name:"pepino". ca. 6000 ft. 8/18/44

The numbers from E-499 through E-510 were collected on a day-long trip to Los Alpes district, near EL Corazon Pass, Pichincha.

E-499. Mutisia
Liana. Rays light scarlet; bracts dark brown-greenish; leaves light green above, pale, tomentose beneath. In sotobosque, Los Alpes, W of El Corazon Pass, Pichincha. ca. 9000 ft. 8/26/44

E-500. Guettardia
Small tree to 4 M. Corollas light cerise, fragrant; fruit dark gray when mature. In sotobosque, Los Alpes, W of El Corazon Pass, Pichincha. ca. 9600 ft. 8/26/44

E-501. Palicourea
Small tree to 2-3 M. Corollas deep yellow; fruit chin blue when ripe; young branches,peduncle, pedicels, petioles purplish. In Los Alpes, W of El Corazon, Pichincha. ca.9600 ft. 8/26/44

E-502. Mannettia
Vine. Corollas white. In Los Alpes, W of El Corazon, Pichincha. ca. 9600 ft. 8/26/44

E-503. Fragaria
Leaves whitish beneath; corollas white; fruit bright red, sweet, pleasant tasting. Roadside, Los Alpes, W of El Corazon, 20 km from Aloag, Pichincha. ca. 9500 ft. 8/26/44

E-504. ~~Gomozia~~ Nertera
Moist bank, Los Alpes, W of El Corazon, 20 km from Aloag, Pichincha. ca. 9400 ft. 8/26/44

E-505. Podocarpus oleofolia
In rainforest, hacienda of Teodoro Pilajuano, Los Alpes, W. of El Corazon, Pichincha. ca. 9000 ft. 8/26/44

E-506. Myrsine
Tree to 4 M. Fruits green. In sotobosque, paramo of El Corazon, Los Alpes, Pichincha. ca. 11,200 ft. 8/26/44

E-507. Tropaeolum tuberosum
Flowers probably scarlet, tubular, but not found on specimen; tubers yellowish green, with reddish markings. Growing as a crop for edible tubers. Hacienda of Teodoro Pilajuano, Los Alpes, 25 km. W of Aloag, W. of El Corazon, Pichincha. ca. 9300 ft. 8/26/44

E-508. Passiflora
Vine. Calyx green, magenta-veined; corolla limbs crimson,corona white; filaments white; anthers yellow; styles purplish above; stigmas green; leaves shiny dark green above, pale beneath. Along trail below Los Alpes toward Santo Domingo, near bridge across small stream. ca. 7400 ft. 8/26/44

E-509. Orchid.
Perianth white. Epiphyte, in cut-over forest, Hacienda of Teodoro Pilajuano, Los Alpes, 25 km W of Aloag, Pichincha. ca. 9300 ft. 8/26/44

E-510. Orchid.
Forest epiphyte. Sepals and lateral petals purplishat base, yellow flecked with fine purplish dots within toward tip; lip white-margined, purple in center; slightly fragrant. In rainforest, Los Alpes, W of El Corazon, Pichincha. ca. 9200 ft. 8/26/44

E-511. The following numbers from E-511 through E-717 inclusive were collected on an expedition to the western cordillera in the general vicinity of the Intac Valley, including such towns and settlements as Calvario, Apuela, Garcia Moreno, and Magnolia. All localities are in Imbabura.

E-511. Palicourea
Small tree to 2 M. Corollas white except for slight purple flush at base of tube; fruits china blue; rachis, pedicels dull maroon; leaves dark green above, pale beneath. In forest, along Intac trail between Muenala and Calvario. ca. 10,000 ft. 9/6/44

E-512. Rubiac. Gonzalagunia
Shrub to 1 M. Corolass white; calyx tube red, the limbs green; leaves shiny dark green above, dull, pale beneath. In forest, along Intac trail between Muenala and Calvario. ca. 10,000 ft. 9/6/44

E-513. Lycopodium
Terrestrial. On steep slope, along Intac trail, between Muenala and Calvario. ca. 9500 ft. 9/6/44

E-514. Orchid.
Terrestrial to 1 M. Sepals, lateral petals a dull orange-red, save for orange crests near column; column slightly darker red; ovary red-brown. Common, along Intac Trail between Muenala and Calvario. ca. 9300 ft. 9/6/44

E-515. Bromeliac.
Terrestrial. Calyx yellowish to flesh color; corollas shell pink; filaments light yellow, anthers yellow; bracts green, dark tipped. Common, along Intac trail, between Muenala and Calvario. ca. 9300 ft. 9/6/44

E-516. Orchid.
Terrestrial. Sepals, petals uniformly red-brown; lateral sepals gibbous at base; column same color, but dark brown on upper surface at tip, as is lip. Along Intac trail between Muenala and Calvario. ca.9300 ft. 9/6/44

E-517. Orchid.
Terrestrial, to 1 M. Ovary, sepals deep cerise,but the latter whitish pink on inner surfaces; lateral petals filform, very pale cerise to white; lip white in center, it and column pale cerise otherwise; rachis, pedicels dark purple-black; spicy fragrant. Along Intac trail between Muenala and Calvario. ca. 9000 ft. 9/6/44

E-518. Orchid.
Terrestrial. Sepals, lateral petals deep coral-pink; lip same color, save for crest, white on margins, bright yellow in center; column almost cerise. Along Intac trail, 2 km from Palo Seco(Las Ventas), above Calvario. ca. 8500 ft. 9/6/44

E-519. Orchid.
Terrestrial. Sepals light yellow, with attenuate yellow-brown tips; lateral petals pure yellow; median petal and colmun purple-brown mottled below, otherwise yellow; ovary green. Along Intac trail, 2-3 km. from Palo Seco (Las Ventas) above Calvario. ca. 8200 ft. 9/6/44

E-520. Polypodium
Epiphyte. Rachis blackish beneath; green on other surface; pinnae dull olive green above. In exposed place, near camp, Palo Seco

E-520. (continued) (Las Vehtas), above Calvario. ca. 8500 ft. 9/6/44

4 E-521. Orchid.
Terrestrial. Leaves purplish beneath, greenish purple above; ovary, sepals orange-red, thivk, fleshy; lateral petals filiform, white; lip, column white to pink. Along Intac trail between Palo Seco (Las Ventas) and Calvario. ca. 6500 ft. 9/7/44

1 E-522. Orchid.
Terrestrial. No flowers seen; whole plant yellow-green. Along Intac trail between ~~Las~~ Palo Seco (las Vehtas) and Calvario. ca. 6500 ft. 9/7/44

2 E-523. Orchid.
Terrestrial, without apparent leaves. Sepals light magenta; lateral petals magenta, white-margined; lip white below, deep magenta-veined above; column deep magenta at tip. Just above Apuela. ca. 5600 ft. 9/7/44

1 E-524. Orchid.
Epiphyte. Sepals light taffy color; lateral petals the same; lip yellow-green, as is column; fruit green. Along Intac trail below Apuela. ca. 3900 ft. 9/7/44

3 E-525. Orchid.
Epiphyte. Sepals, petals pure white; lip delicately fringed, with yellowish crest; fruits pale green. Along Intac trail between Apuela and Monopamba. ca. 3400 ft. 9/7/44

1 E-526. Orchid.
Epiphyte. Sepals flesh-color; petals light yellow; lip nearly white, the upper surface as if pleated with tiny folds; column greenish purple. Along Intac trail between Monopamba and Garcia Moreno. ca. 4200 ft. 9/7/44

1 E-527. Orchid.
Epiphyte. Flower withered, though yellow-green throughout; fruit pale, green. Along ~~trail~~ Intac trail about 4 km from Garcia Moreno. ca. 4000 ft. 9/8/44

2 E-528. Vaccinium
Liana. Calyx pale red; corolla tube white at base, pale green above, the lobes w hitened with short hairs on inner surface. In forest along Intac trail just above Garcia Moreno. ca. 4000 ft. 9/8/44

2 E-529. Bixa orellana
Small tree. Corollas white. Common in clearings above Garica Moreno. ca. 4000 ft. "achote". 9/8/44

3 E-530. Palicourea
Small tree to 4 M. Leaves dull green above, paler green below, hirsute; rachis, pedicels reddish orange; fruits green; fresh flowers not seen, but withered ones purplish. At side of road, Intac trail, just above Garcia Moreno. ca. 4200 ft. 9/8/44

3 E-531. Solanum quitoense
Suffructescent herb, to 2 M. Corollas whish to pale magenta.

E-531. (continued). Common at edges of clearings, above Garcia Moreno. ca. 4200 ft. "Naranjilla" 9/8/44

E-532.
Suffructescent herb to 2 M. Leaves shiny dark green above; dull, dark purple beneath; calyx pale green; corolla tube pale yellowish below, darker yellow at throat, covered with yellowish pubescence. At edge of clearing near Garcia Moreno. ca. 4100 ft. 9/8/44

E-533. Orchid.
Epiphyte. No flowers; fruits green. In forests above Garcia Moreno. ca. 5000 ft. 9/8/44

E-534. Orchid.
Epiphyte. Sepals greenish white, cucullate at tips; lateral petals white; lip white, but slightly suffused with yellow and purple-dotted in throat; column uniformly cream-white; no fragrance. In forest above Garcia Moreno. ca. 5000 ft. 9/8/44

E-535.
Shrub to 4 M. Leaves dull green above, pale, dull beneath; bracts, pedicels, etc. green; corollas pure white; fruit not found. In forests above Garcia Moreno. ca. 5000 ft. 9/8/44

E-536. Orchid.
Epiphyte. Perianth olive-yellow, the attenuate portions red-brown; column with dark purple ring above; fruit green. In forest above Garcia Moreno. ca. 5000 ft. 9/8/44

E-537. Palicourea
Tree to 4 M. Leaves dark, dull green above, pale beneath; rachis flesh color; corollas yellowish flesh color; no fruits. In forests above Garcia Moreno. ca. 5000 ft. 9/8/44

E-538. Palicourea cf. Rostica
Tree to 8 M. Leaves dull dark green above, pale dull green beneath; rachis, pedicels a deep orange-red; calyx, ovary deep pink; corolla tube deep pink, the lobes olive-brown within; no fruits. In forest, above Garcia Moreno. ca. 5000 ft. 9/8/44

E-539.
Tree to 7 M. Leaves dull dark green above, pale dull green beneath; rachis, pedicels light magenta; fruits pale green; calyx persistent, light magenta. In forests above Garcia Moreno. ca. 5000 ft. 9/8/44

E-540. Bromeliac.
Epiphytic (?). Peduncle red-brown, covered with brownish scurfy scales; bracts bright red, yellow at tips; perianth bright yellow; leaves dark green. In forest above Garcia Moreno. ca. 5000 ft. 9/8/44

E-541. Gesneriac.
Liana. Leaves dark shiny green above, pale dull beneath, with bright red tips; bracts light yellow, dark purple blotches in centers; calyx similar to bracts in color; corolla almost white, slightly yellow on sides of throat, dark purple blotches inside each lateral lobe. In forest above Garcia Moreno. ca. 5000 ft. Known locally as "lengua de tigre" 9/8/44

E-542. Bromeilac.
Epiphyte. Bracts, calyx green; corollas white. In forest, along trail to San Luis de la Vega, below Garcia Moreno. ca. 3300 ft. 9/9/44

E-543. Orchid.
Epiphyte. Bracts brown; leaves dark green; no fresh flowers. In forest, along trail to San Luis de la Vega, below Gracia Moreno. ca. 3700 ft. 9/9/44

E-544. Bromeliad.
Epiphyte. Leaves green; bracts tipped deep pink; ~~perianth~~ calyx pale green below, pure white above; corolla pur white. In forest, near San Luis de la Vega, below Garcia Moreno. ca. 3300 ft. 9/9/44

E-545. Lycopodium
Pendent epiphyte. In forest, along trail just above San Luis de la Vega, below Garcia Moreno. ca. 3400 ft. 9/9/44

E-546. Condaminea corymbosa
Tree to 6 M. Calyx, pedicels green; corolla tube blue-purple; corolla lobes pale green within, blue-purple on outer surfaces; capsules opening from above dowhward. In forest above San Luis de la Vega, below Garcia Moreno. ca. 3500 ft. 9/9/44

E-547. Orchid.
Epiphyte. Sepals, petals yellow and red-brown spotted; lip tipped yellow; column pale green, long-stalked; leaves dark purple beneath. In forest, trail above San Luis de la Vega, below Garcia Moreno. ca. 7500 ft. 9/9/44

E-548. Orchid.
Epiphyte. Sepals white, lightly flushed flesh color; petals white, light flesh color at tips; medianpetal with white fringe at tip, dark purple-blotched below; column white. In forest, along trail to San Luis de la Vega, below Garcia Moreno. ca. 4000-5000 ft. 9/9/44

E-549. Orchid.
Epiphyte. Noflowers; fruits, bracts yellow-green. In forest, along trail to San Luis de la Vega, below Garcia Moreno. ca. 3500-4000 ft. 9/9/44

E-550. Orchid.
Epiphyte. No flowers found; fruits light green; leaves dark green. In forest, trail to San Luis de la Vega, below Garcia Moreno. ca. 3500-4000 ft. 9/9/44

E-551. Orchid.
Epiphyte. Sepals pale green; lateral petals green, tinged with red; column orange-red. In forest, trail to San Luis de la Vega, belww Garcia Moreno. ca. 3500-4000 ft. 9/9/44

E-552. Orchid.
Epiphyte. Leaves shiny green above; sepals and lateral petals greenish white, dark purple flecked; column and median petal whitish, delicately lilac tinged. In forest, along trail to San Luis de la Vega. ca. 3500-4000 ft. 9/9/44

E-553. Rubiac. ? Hillia
3 Liana. Leaves shiny green above, pale shiny beneath; stipules, calyces green; corolla white, becoming yellowish in age, lightly purplish flushed at throat. In forest, trail to San Luis de la Vega. ca. 3500-4000 ft. 9/9/44

1 E-554. Orchid.
Epiphyte. Bracts pale green, dotted with fine purple dots; sepals petals thick, fleshy, white translucent, mottled with deep pink; median petal mottled with magenta, sac-shaped and 3-lobed at top; column nearly pure white; slight odor. In forest, trail to San Luis de la Vega, below Garcia Moreno. ca. 3500-4000 ft. 9/9/44

1 E-555. Orchid.
Epiphyte. Sepals, lateral petals light yellow; lip darker yellow, orange flecked below column; column light yellow. In forest, trail to San Luis de la Vega, below Garcia Moreno. ca. 3500-4000 ft. 9/9/44

2 E-556. Ladenbergia macrocarpa
Tall tree to 30 M. In forest, trail to area San Luis de la Vega, below Garcia Moreno. ca. 4000 ft. 9/9/44

2 E-557. Rubiac.
Small tree to 8 M. Leaves dull green, pale beneath; mature fruit deep blue-black; no flowers seens; rachis green. In forest, along trail to San Luis de la Vega, below Garcia Moreno. ca. 3500-4000 ft. 9/9/44

1 E-558. Palicourea
Small tree to 5 M. Leaves dark shiny green above, pale beneath; rachis bright orange-red; corolla bright yellow; fruit dark black-purple. In forest, trail to San Luis de la Vega, below Garcia Moreno. ca. 4000 ft. 9/9/44

3 E-559. Orchid.
Epiphyte. Leaves pale gray-green; no flowers; fruits soft, spiny, green. In forest, along trail to San Luis de la Vega, below Garcia Moreno. ca. 4000 ft. 9/9/44

2 E-560. Passiflora
Liana. Leaves dull dark green above, pale below; calyx, pedicels dark green; corollas bright orange; anthers yellow; fruit pale green in color, but probably unripe. In forest, along trail to San Luis de la Vega. ca. 4000 ft. 9/9/44

1 E-561. Orchid.
Epiphyte. Sepals, lateral petals olive green with brown splotches; lip bright yellow, splotched with lightbrown; column olive green. In forest, trail to San Luis de la Vega, below Garcia Moreno. ca. 4100 ft. 9/9/44

1 E-562. Melastom.
Shrub. Perianth white; anthers deep pink; filaments light pink; leaves pale green beneath. "Cebolleta". In forest, along trail to San Luis de la Vega, below Garcia Moreno. ca. 4100 ft. 9/9/44

E-563. Orchid.
Epiphyte. Sepals pale green, lightly purple flushed; petals reduced to pale green points around column. In forest, along trail below Garcia Moreno. ca. 4100 ft. 9/9/44

E-564. Lycopodium
Pendent epiphyte. No sporangia. In forestm trail below Garcia Moreno. ca. 4100 ft. 9/9/44

E-565. Hymenophyllac.
Terrestrial. In wet, heavy shade, along trail from Garcia Moreno to Magnolia. ca. 5300 ft. 9/11/44

E-566. Orchid.
Epiphyte. Yellow perianth; lip orange flushed at base near column. In forest, trail from Garcia Moreno to Magnolia. ca. 5200 ft. (Similar to # E-555). 9/11/44

E-567. Orchid.
Epiphyte. Persistent perianth on fruit green in color; sepals slightly colored along veins; laterla petals filiform; lip and column green; leaf blades green, sheaths dark purple. In forest, along trail from Garcia Moreno to Magnolia. ca. 5300 ft. 9/11/44

E-568. Orchid.
Epiphyte. Sepals dark magenta, green-margined; lateral petals similar in color; lip a lighter shade of magenta, paler above than beneath. In forest, along trail between Garcia Moreno and Magnolia. ca. 5200 ft. 9/11/44

E-569. Bromeliac.
Epiphyte. Leaves pale green, purplish nerved and flushed beneath; bracts bright, light red, almost crimson; perianth light yellow, thos flowers not fully open. In forest below Magnolia. ca. 5200 ft. 9/11/44

E-570. Palicourea ?
Small tree to 3 M. Leaves dull dark green above, pale dull beneath; fruits dark blue-black; rachis of inflorescence orange-red; no flowers seens. In forest below Magnolia. ca. 5200 ft. 9/11/44

E-571. Orchid.
Epiphyte. Perianth of uniform orange-red; crest on lip yellow. In forest in felled srea, near Magnolia. ca. 4800 ft. 9/12/44

E-572. Palicourea
Small tree to 4 M. Leaves dark shiny green above, dull pale beneath; rachis deep pink; corolla pinkish-orange, the lobes olive brown within; fruits immature, green in color. In forest, along trail to Rio Chalguayaco. ca. 4800 ft. 9/12/44

E-573. Fern asplenium
Terrestrial. Along forest trail to Rio Chalguayaco. ca. 4000 ft. 9/12/44

E-574. Fern asplenium
Terrestrial. In forest, trail to Rio Chalguayaco. ca. 4100 ft. 9/12/44

E-575. Orchid.
Epiphyte. Perianth yellow- same as #E-566 & ~~555~~, with good fruit. In forest, along trail to Rio Chalguayaco. ca. 4500 ft. 9/12/44

E-576. Orchid.
Epiphyte. Sepals, petals (lateral) white; lip fringed, the margins crisped, white with purple flecks within/ below column; column cream-white, purple-flecked at base only. In forest, along trail to Rio Chalguayaco. ca. 4200 ft. 9/12/44

E-577. Orchid.
Epiphyte. Bracts, ovary pale green; sepals pale green at base, red-brown flecked with yellow ~~at tip~~ above, the tip pure yellow; lateral petals similar in color; median petal very light yellow, with pale brownish flecks in a ring above, attenuate with point bent downward at right angles to the sepals; column pale green. In forest, along trail to Rio Chalguayaco. ca. 4200 ft. 9/12/44

E-578. Orchid.
Epiphyte. Bracts, ovary, sepals and lateral petals pure white; lip white-margined with deep pink spots above abd below; column pure white. In forest, along trail to Rio Chalguayaco. ca. 4000 ft. 9/12/44

E-579. Rubiac. Psychotria
Shrub to 1½ M. Leaves dark dull green above, pale beneath; peduncle, pedicels, bracts dark dull green, ♀ corollas pure white; fruit pale green. In forest, along trail to Rio Chalguayaco. ca. 4400 ft. 9/12/44

E-580. Rubiac. Cephaelis
Shrub to 3 M. Leaves dull dark green above, pale dull green beneath; peduncle pale green; bracts pure white; corolla pure white, the exterior hirsute; fruit dark purple (?). In forest, along trail to Rio Chalguayaco. ca. 4300 ft. 9/12/44

E-581. Orchid.
Epiphyte. Bracts, pedicels and floral parts withered and brown; leaves light green. On recently felled tree, along trail to Rio Chalguayaco. ca. 4300 ft. 9/12/44

E-582. Orchid.
Epiphyte. Perianth probably light purple; fruits dark green; leaves ~~light~~ dark green. On felled tree, along trail to Rio Chalguayaco. ca. 4300 ft. 9/12/44

E-583. Hymenophyllac. Trichomanes
Epiphyte. Fronds pale green. In forest, along trail to Rio Chalguayaco. ca. 4300 ft. 9/12/44

E-584. Vitt.
Epiphyte. In forest, along trail to Rio Chalguayaco. ca. 4200 ft 9/12/44

E-585. Palmae.
Small tree to 2 M. Peduncle dull orange; unripe fruits dull orange, black when ripe; stem, bracts, leaves dark green. In deep shade of forest, along trail to Rio Chalguayaco. ca. 4600 ft. 9/12/44

E-586. Lycopodium

E-586. Pendent epiphyte. In forest, along trail to Rio Chalguayaco. ca. 4600 ft. 9/12/44

E-587. Orchid.
Terrestrial. Leaves dark dull green above, pale beneath; pedicels bracts green; parts of perianth bronze-color outside, white within, the throat scarcely open. In forest, along trail to Rio Chalguayaco. ca. 4500 ft. 9/12/44

E-588. Rubiac.
Small tree to 4 M. Leaves dark dull green above, pale beneath; bracts light to dark violet; corollas white (?); fruits bright violet. In forest, along trail to Rio Chalguayaco. ca. 4600 ft. 9/12/44

E-589. Rubiac.
Small tree to 4 M. Leaves same as in number E-588; bracts nearly white, lightly flushed with pale purple; corollas pure white; no fruits seen. In forest, along trail to Rio Chalguayaco. ca. 4600 ft. 9/12/44

E-590. Ophioglossac. *Ophioglossum palmatum*
Epiphyte. Fertile fronds pale greenish yellow. In forest, along trail to Rio Chalguayaco. ca. 4600 ft. 9/12/44

E-591. Rubiac.
Smalltree to 5 M. Leaves dull dark green above, pale shiny green beneath; fruit clusters pendent, each fruit shiny dark green; calyx dark green; peduncle, pedicels dark green; no corollas seen. In forest, along trail to Rio Chalguayaco. ca. 4800 ft. 9/12/44

E-592. Rubiac.
Small tree to 4 M. Leaves dark dull green above, pale dull beneath; bracts deep violet; corollas whitem the exterior hirsute. (Probably same as # E-588 and E-589). In forest, along trail to Rio Chalguayaco. ca. 4750 ft. 9/12/44

E-593. Manihot
Tall suffructescent herb. Flowers reddish; fruits green; leaves whitish beneath. In abandoned plantation, near Magnolia. ca. 5000 ft. (Yuca) 9/12/44

E-594. Orchid.
Epiphyte. Perianth a uniform pale, almost translucent green; lip revolute; leaves pale green. In forest, along trail to Rio Chalguayaco. ca. 4300 ft. 9/12/44

E-595. *Elaphroglossum?*
Epiphyte. Pale green fronds. In forest, along trail to Rio Chalguayaco. ca. 4750 ft. 9/12/44

E-596. Orchid.
Terrestrial. Rachis, bracts, ovaries and sepals dull green; petals dark dyll green on inside; column very pale green; leaves dull dark green above; pale, shiny beneath. In forest, along trail to Rio Chalguayaco. ca. 4750 ft. 9/12/44

E-597. Orchid.

E-597. Epiphyte. No flowers; leaves, fruits dark shiny green. In forest, along trail to Rio Chalguayaco. ca. 4850 ft. 9/12/44

E-598. Orchid.
Terrestrial. Leaves light green; peduncles, bracts pale green; sepals white, very delicately pink-spotted within; lateral petals and column whitish outside, deep pink-spotted within. In forest, along trail to Rio Chalguayaco. ca. 5000 ft. 9/12/44

E-599. Orchid.
~~Epiphy~~ Terrestrial. Peduncle, ovary pure white; lateral sepals and petals white with pink spots within; lip tuberculate with magenta tubercles; column white. In forest, along trail to Rio Chalguayaco. ca. 4900 ft. 9/12/44

E-600. Orchid.
Epiphyte. Sepals white, the tips reflexed; lateral petals greenish white; lip and column fused, purple-tipped, otherwise white; leaves dark green. In forest, along N trail to Rio Chalguayaco. ca. 3850 ft. 9/13/44

E-601. Orchid.
Epiphyte. Sepals magenta, fringed with white hairs; petals reduded to points, deep magenta; column same color. In forest, along N trail to Rio Chalguayaco. ca. 3850 ft. 9/13/44

E-602. fern ?
Epiphyte. Fronds dark green. In forest, along N trail to Rio Chalguayaco. ca. 4000 ft. 9/13/44

E-603. fern
Terrestrial. In forest, along N trail to Rio Chalguayaco. Rachis black, with rusty brown scales which are also on rachis of pinnae. ca. 4000 ft. 9/13/44

E-604. fern
Terrestrial. Rachis dark brown-balck. In forest, near Rio Chalguayaco. ca. 3500 ft. 9/13/44

E-605. fern
Terrestrial. Rachis pale green. In forest, playa of Rio Chalguayaco. ca. 3300 ft. 9/13/44

E-606. Rubiac.
Small tree to 6 M. Leaves dull dark green above, pale dull beneath; no flowers seen; peduncle, pedicels dark green; fruit cherry-red. In forest, near Rio Chalguayaco. ca. 3500 ft. 9/13/44

E-607. Rubiac. Condaminea corymbosa
Tree to 5 M. Corlla pale magenta, the lobes pale green, lightly flushed magenta at throat, fleshy. In forest, near Rio Chalguayaco. ca. 3500 ft. 9/13/44

E-608. Orchid.
Epiphyte. Perianth white, dark purple-spotted within; column white. In forest, along N trail to Rio Chalguayaco, near Magnolia. ca. 5000 ft. 9/13/44

E-609. Orchid.
Epiphyte. Peduncle dark green; bracts pale green, almost white; sepals and lateral petals bright orange with somewhat darker spots within; lip pale lemon@yellow, orange-f;ecked, the tip reflexed; column pale greenish white. In forest, near Magnolia. ca. 5300 ft.
9/13/44

E-610. Elaphoglossum
Epiphyte. Pinnae covered beneath with light colored, rusty brown scales. In forest, along trail to Rio Chalguayaco. ca. 4200 ft.
9/13/44

E-611. Passiflora
Vine. Sepals pale green with fleshy appendages at tips; petals white; corona of hairs, with white and violet bands alternating; style green; stigma yellow; anthers yellow. In forest near Magnolia. ca. 5450 ft.
9/13/44

E-612. Psychotria
Herb. Leaves dark dull green above, pale dull beneath; rachis, pedicels dark green; corolla pure white in bud and in anthesis; fruit pale greenish white. In forest, near Magnolia. ca. 5300 ft.
9/13/44

E-613. Fern
Terrestrial. Rachis black; pinnae dark green above, pale beneath. In forest, along N trail to Rio Chalguayaco. ca. 4600 ft.
9/13/44

E-614. Orchid.
Epiphyte. Sepals greensih, almost translucent, purple spotted within; lateral petals similar in color and shape; lip broad, apiculate, white; column white, purplish at base. ca. 3800 ft.
9/13/44

E-615. Orchid.
Epiphyte. Sepals, lateral petals long attenuate, greenish white, purple-spotted below within; lip long attenuate , lightly pink-flushed, purplish at base; column light purple at base. (Similar to #E-614 but probably different species.) In forest, bank of Rio Chalguayaco. ca. 3500 ft.
9/14/44

E-616. Fern
Epiphyte. Fronds light gree. On tree on bank of Rio Chalguayaco. ca. 3400 ft.
9/14/44

E-617. Blechnum
Terrestrial. Rachis pink;fronds dark green above, pale beneath. Banks of Rio Chalguayaco. ca. 3400 ft.
9/14/44

E-618. Lauraceae
Tree to25 M. ~~In~~ Leaves dark green above, pale beneath; fruit with orange involucre or disc below, and dark green drupe or berry; no flowers found. In forest, near Rio Chalguayaco. ca. 3400 ft.
9/14/44

E-619. Orchid.
Epiphyte. No flowers; leaves dark green above, pale beneath;

E-619. fruit dark green, ribs pale green. In forest, above Rio Chalguayaco. ca. 3450 ft. 9/14/44

E-620. Palicourea
Small tree. Leaves dark shiny green above, pale dull green beneath; peduncle deep pink; pedicels pale pink; corollas yellowish to nearlt flesh-color; fruits a deep blue-black. OVerhanging the stream, Rio Chalguayaco. ca. 3450 ft. 9/14/44

E-621. Lycopodium
Epiphyte. In forest, trail along Rio Chalguayaco. ca. 3450 ft. 9/15/44

E-622. Rubiac.
Small tree to 5 M. Leaves dark green, slightly shiny above, pale shiny beneath; peduncle and calyx very palwe green; corolla pure white; fruit a bright dull china-blue. In forest, above Rio Chalguayaco. ca. 3500 ft. 9/15/44

E-623. Orchid.
Epiphyte. Flower on short peduncle from base of plant; lateral sepals taffy color; lateral petals pale taffy color; lip lemon yellow, mottled with dark maroon; column very pale yellow, flecked with magenta above. In forest, above Rio Chalguayaco. ca. 3500 ft. 9/15/44

E-624. ~~Joosia~~ Rondeletia??
Small tree to 4 M. Leaves pale green beneath, dull dark green above; calyces and peduncles pale green; corolla tube deep coral red, the lobes a deep pink with crisped margins; fruit a capsule, septicidal. In forest above Rio Chalguayaco. ca. 3500 ft. 9/15/44

E-625. Orchid.
Epiphyte. Sepals olive green; lateral petals filiform, pale green; lip and column fused, breen below, the lobes pale greenish white; fruit pale green. In forest above Rio Chalguayaco. ca 3500 ft. 9/15/44

E-626. Hymenophyllac.
Epiphyte. In forest above Rio Chalguayaco. ca. 3400 ft. 9/15/44

E-627. Asplenium?
Terrestrial. Rachis dark purple-black; fronds dark green. In forest above Rio Chalguayaco. ca. 3500 ft. 9/15/44

E-628. Tectaria?
Terretrial. Tripinnate fronds to 2 M long; dark green fertile fronds slightly taller, narrower. In forest above Rio Chalguayaco. ca. 3400 ft. 9/15/44

E-629. Orchid.
No flowers found; fruits green. In forest above Rio Chalguayaco. ca. 4000 ft. 9/17/44

E-630. Guettarda
Tree to 10 M. Leaves dull dark green above, pale beneath; bark gray smooth; fruits plum-red, spicy aromatic. In forest above Rio Chalguayaco. ca. 3700 ft. 9/17/44

E-631. Rubiac. Faramea ? Rubiac ?
Small tree to 4 M. Leaves dull dark green above, pale dull beneath; fruit very pale green, nearly white; rachis green. In forest, abobe Rio Chalguayaco. ca. 4000 ft. 9/17/44

E-632. Palicourea
Small tree to 3 M. Leaves dark shiny green above, pale beneath; rachis cerise; fruits deep blue-black. In forest above Rio Chalguayaco. ca. 3800 ft. 9/17/44

E-633. Bromeliac.
Epiphyte. Leaves dark shiny green above, pale beneath; peduncle purplish green; bracts magenta; rachis between flowers and fruits green; fruits white; corlla yellow. In forest, aboe Rio Chalguayaco. ca. 4160 ft. 9/17/44

E-634. Orchid.
Epiphyte. Leaves dark green above, pale beneath; flower borne on basal stalk; sepals, lateral petals deep pink; lip with dark purple spots within, white to center of median lobe which is deep pink at tip; column white, purple spotted. In forest, above Rio Chalguayaco. ca. 4300 ft. 9/17/44

E-635. Rubiac.
Small tree to 4 M. Corollas pure white; rachis, calyx dark green; leaves dark green, shiny above, pale beneath; fruit white juicy. Forest above Rio Chalguayaco. ca. 3900 ft. 9/17/44

E-636. Orchid.
Terrestrial. Leaves pale green; bracts pale green; sepals light pink outside, light pink-dotted within; lateral petals light pink outside, deep pink-dotted within; lip with terminal white lobe reflexed, otherwise white outside, deep pink-dotted within at base of column, and with yellow appendage, purple-flecked arising from base at junction with column; column yellow with purple spots at base, white above to tip; odor resiny. In forest above Rio Chalguayaco. ca. 4200 ft. 9/17/44

E-637. Scleria ?
Tall grass-like herb to 3M. Spikelets brown. On forest ridge above Rio, Chalguayaco. ca. 4250 ft. 9/17/44

E-638. Bromeliac.
Epiphyte. Leaves dark green, slightly paler beneath; bracts crimson; corolla yellow below, deep purple above. In forest above Rio Chalguayaco. ca. 4100 ft. 9/17/44

E-639. Orchid.
Epiphyte. Leaves dark green; bracts light green in anthesis, becoming brown and dry in fruit; perianth pure white. In forest above Rio Chalguayaco. ca. 4000 ft. 9/17/44

E-640.
Small tree to 5 M. Leaves dull dark green above, pale beneath; fruits orange when ripe; no pronounced odor or flavor. In forest above Rio Chalguayaco. ca. 3900 ft. 9/17/44

E-641. Orchid.

E-641. Orchid.
Epiphyte. Leafe pale green above and beneath; peduncle white, with bracts finely dotted with purple;sepals pure white toward tip, sligtly more cream-white below; lateral petals pure white cream-white, each with 2 large royal purple spots, one above, one below, on inner surface only; lip 2-lobed, thick, fleshy, shiny, waxy white at tips of lobes, cream-white within becoming abruptly yellow with royal purple "figure" at base on inner surface only- the purple "figure" extending to both margins of boat-like inner part of lip-; column white throughout, save for pale blue-green flush on upper central surface; no parthcular odor. In forest, above Rio Chalguayaco. ca. 4300 ft. 9/17/44

E-642. Orchid.
Pendent epiphyte. Leaves dark green; perianth a very pale yellow, almost cream-white; the lip flecked with orange below the white column; fruits light green. In forest above Rio Chalguayaco. ca. 4500 ft. 9/17/44

E-643. Rubiac.
Small tree to 3-5 M. Leaves shiny dark green above, pale beneath and covered with short pale hairs; stipules conspicuous, pale green flushed with pink; fruit terminal on branch, 1-2 inches in diam., white within, green outside (perhaps not mature); no flowers seen. In forest, above Rio Chalguayaco. ca. 3800 ft. 9/17/44

E-644. Orchid.
Epiphyte. Leaves dark green above, pale purple beneath; sepals very pale purple outside, whitish within; laterla petals filiform, white; lip 3-lobed, white; column green-purple at base, white at tip; fruit green-purple. In forest above Rio Chalguayaco. ca.3850 ft. 9/17/44

E-645. fern
Terrestrial. In forest near Rio Chalguayaco. ca. 3400 ft. 9/16/44

E-646.
Terrestrial. Herb, $\frac{1}{2}$ M tall. Fruits coffee color when ripe, orange when unripe; leaves light green. In forest, near Rio Chalguayaco. ca. 3400 ft. 9/16/44

E-647. Rubiac. Cinch.?
Tree sprout, to 1 M. Leaves dark dull green above, very pale beneath; no flowers or fruits. In forest near Rio Chalguayaco. ca. 3500 ft. 9/16/44

E-648. Orchid.
Epiphyte. Perianth pale yellow-green; fruit pale green; leaves dark green. In forest near Rio Chalguayaco. ca. 3950 ft. 9/16/44

E-649. Rubiac. Remijia Cinchona?
Small tree. Corollas deep pink to magenta; leaves pale green, especially beneath; fruits pale green (unripe). In forest above Rio Chalguayaco. ca. 4000 ft. 9/16/44

E-650.
Epiphyte. In forest above Rio Chalguayaco. ca. 4000 ft. 9/16/44

E-651. Orchid.
Epiphyte. Sepals olive-green, revolute; petals pale yellow-green, almost translucent; column green; leaves pale gree.n. In forest near Rio Chalguayaco. ca. 4250 ft. 9/16/44

E-652. Orchid.
Terretrial. bracts green; ovaries, bases of sepals pale green; tips of sepals very pale green to whitw; petals white to light lavendar; leaves shiny green above, paler dull beneath. In forest, above Rio Chalguayaco. ca. 4400 ft. 9/16/44

E-653. Orchid.
Epiphyte. Perianth uniformly yellow; ovary green ; leaves dark shiny green above, pae beneath; bracts pale green to whitish. In forest on ridge above Rio Chalguayaco. ca. 4500 ft. 9/16/44

E-654. Orchid.
Epiphyte. Sepals light pink, dark purple spotted; laterla petals white, lightly flushed pink, dark purple-tipped; lip dark purple, short. In forest abobe Rio Chalguayaco.. ca. 3900 ft. 9/16/44

E-655. Orchid.
Epiphyte. Sepals white, translucent; laterla petals similar; lip same but deep magenta dotted throughout; column pure white; leaves dark greebn above, pale beneath. In forest above Rio ~~Chalguayaco.~~ Luisa ca. 3900 ft. 9/17/44

E-656. Orchid.
Epiphyte. Lateral petals, sepals light green; lip pale green at tip, white at base; column pale green; leaves pale green above, paler beneath. In forest above Rio ~~Chalguayaco~~. ca. 3200 ft. Luisa 9/17/44

E-657. Orchid.
Epiphyte. Sepals pale translucent yellow, light magenta-spotted in centers; petals brighter yellow, the laterals deep magenta-blotched; lip with light red-brown blotch toward base; column pale green; leaves grass green above and beneath. In forest above Rio ~~Chalguayaco.~~ ca. 3900 ft. Luisa 9/17/44

E-658. Orchid.
Epiphyte. Perianth white, chocolate-tipped (Lost in transit.) In forest above Rio Luisa. ca. 3200 ft. 9/17/44

E-659. Orchid.
Epiphyte. Leaves dark dull green above, pale green beneath; sepals white, fleshy; lateral petals of same color; lip with light yellow on upper surface, light purple-spotted on same surface; column white; peduncle and bracts white. In forest above Rio Luisa. ca. 3900 ft. 9/16/44

E-660. Orchid.
Epiphyte. Leaves pale green; sepals white, purple-dotted; petals white, light lavendar-flushed at base; column deep magenta;

E-660.(continued) fruit light green. In forest near Playa Luisa. ca. 3200 ft. 9/17/44

E-661. Asplenium
Terrestrial. In forest, Playa Luisa. ca. 3300 ft. 9/17/44

E-662. Rubiac.
Tree to 2 M. Leaves light shiny green above; pale shiny beneath; sepals pale green, fleshy; corolla pure white, thick and sub-fleshy. In forest, Playa Luisa. ca. 3280 ft. 9/17/44

E-663. Orchid.
Epiphyte. Leaves dark green above, pale beneath; flowers in bud; sepals light red with orange margins. In forest, Playa Luisa. ca. 3200 ft. 9/17/44

E-664. Rubiac. Psychotria
Tree to 6 M. Leaves dark shiny green above, pale dull beneath and soft hairy both surfaces; rachis green; mature fruit a currant-red, immature green to orange; no flowers found. In forest, Playa Luisa. ca. 3300 ft. 9/17/44

E-665. Orchid.
Epiphyte. Sepals pale green. lightly purple-flushed on outer surfaces; lateral petals filiform, same color; lip and column fused, pale green throughout, rather fleshy; leaves pale dull green, paler beneath. In forest, Playa Luisa. ca. 3200 ft. 9/17/44

E-666. Lycopodium
Pendent epiphyte. Light green. In forest, Playa Luisa. ca.3200 ft. 9/17/44

E-667. Orchid.
Epiphyte. Leaves dull dark green, pale green beneath; persistent perianth green, tough and sub-fleshy; column pale green; lip not well preserved; ovary and fruit green. In forest, Rio Chalguayaco. ca. 3400 ft. 9/17/44

E-668. fern
Terrestrial. Fronds pinnate to 3 M, dark green above, pale beneath; rachis devoid of scales or hairs, light green to green mottled with purple. In forest, Playa Luisa. ca. 3200 ft. 9/17/44

E-669. ~~Convolv.?~~ Cyper.
Vine. Leaves dark shiny green above, pale dull bneath; peduncles pedicels, calyx and young flower buds a pale green; flowers in anthesis with deep pink tube below, light green to nearly white above, the lobes pale green at centers, whitish toward tips. In forest of Playa Luisa. ca. 3200 ft. 9/17/44

E-670. Asclepiadac.
Vine. Leaves dark dull olive-green above, pale tomentose beneath; sepals dark green; petals greensih white, the nerves a conspicuous green; base of gynostegium green, pure white above. In forest, Playa Luisa. ca. 3200 ft. 9/17/44

E-671. Orchid.

E-671. Epiphyte. Sepals, lateral petals cream-white; lip cream-white; conspicuously light brown-nerved within; column cream-white; peduncle, pedicels, bracts pale green; leaves light shiny green above, pale dull beneath. In forest, Playa Luisa. ca. 3400 ft. 9/17/44

E-672. Orchid.
Epiphyte. Peduncle light red; sepals deep pink on outer surfaces, translucent, pale pink within; lateral petals translucent, linear, yellowish; lip bright yellow, with bright magenta spots; column white with pink spots; leaves pale green above and beneath; fruit dark purple. In forest above Rio Chalguayaco. ca. 3500 ft. 9/17/44

E-673. Orchid.
Epiphyte. Leaves dark green above, pale beneath; bracts and peduncle whitish with brownish flecks along nerves; sepals subfleshy, light orange, flecked with minute brown spots on outer surfaces; lateral petals fleshy, pale orahge; lip thick, fleshy, pale orange throughout except under base of column, where it is white with two large cerise blotches; column pure white throughout. In forest, Playa Luisa. ca. 3200 ft. 9/17/44

E-674. Orchid.
Epiphyte. Leaves dark shiny green; bracts,pedicels, ovaries pale green; sepals pale yellow-orange; lateral petals similar, but with red-brown dots on inner surfaces, revolute; lip bright yellow with red-brown blotches above; column yellow with 2 linear flecks of red-brown above the lip. Below Garcia Moreno, ca. 4000 ft. 9/19/44

E-675. Rubiac.
Tree to 6 M. Leaves dark dull green above; pale dull beneath; rachis green; bracts, pedicels, calyxes pale green; corollas white; fruit green, but immature. In forest, below Garcia Moreno. ca. 4000 ft. 9/19/44

E-676. Passiflora
Vine. Corolla orange; anthers yellow; leaves light green, paler beneath; calyx green. Along trail in forest below Garcia Moreno. ca. 4800 ft. 9/20/44

E-677. Orchid.
Epiphyte. Sepals dark purple, green-margeined and nerved on outer surfaces; petals and column similar in color pattern. In forest, Limones. ca. 4200 ft. 9/20/44

E-678. Lycopodium
Pendent epiphyte. In forest, Limones. ca. 4500 ft. 9/20/44

E-679. Orchid.
Pendent epiphyte. Sepals pale green, purple-dotted; lateral petals similar to sepals; lip light lavendar; column light lavendar also; fruit light shiny green. In forest, Limones. ca. 4350 ft. 9/20/44

E-680. Pityrogramma
2 Terrestrial. Rachis black; pinnae dark green above, white beneath. On bank of stream, Limones. ca. 4100 ft. 9/20/44

2 E-681.
Climbing epiphyte. Pale green fronds; sori with conspicuous dark black hairs protruding. In forest, Limones. ca. 4300 ft. 9/20/44

2 E-682. Guttif.
Tree to 5 M. Leaves pale green above, paler beneath; pedicels and calyxes green; corollas, ovaries white. (Same as #E-640, collected in fruit). In forest, Limones. ca. 4200 ft. 9/20/44

3 E-683. Orchid.
Epiphyte. Leaves shiny green above, paler beneath; sepals pure white, translucent, with crisped margins; lateral petals similar; lip cream-white, folded in center around white column, also with margins slightly crisped. In forest, Limones. ca. 4500 ft. 9/20/44

2 E-684. Hydrangea ?
Tree Liana to 10 M. Leaves dark dull green above, pale beneath; sterile flowers with deep pink bracts; fertiles flowers deep maroon; pedicels maroon, covered with brownish scurfy pubescence. In forest, La Union. ca. 4600 ft. 9/20/44

1 E-685. fern
Climbing epiphyte. Fronds pale green above, whitened beneath (ie. glaucous); sori brown. In forest, below Garcia Moreno. ca. 4900 ft. 9/20/44

2 E-686.
Climbing epiphyte. Fronds light green; sori dark brown. In forest, Limones. ca. 4300 ft. 9/20/44

1 E-687. Blechnum occidentale
Terrestrial. Fronds dark green above, very pale beneath; sori brown; rachis green. In forest above Limones. ca. 4700 ft. 9/20/44

1 E-688. Orchid.
Epiphyte. Leaves dark shiny green above, paler beneath; peduncle deep pink; sepals translucent yellowish pink; lateral petals similar; lip bright yellow, save for maroon blotches in center above, and beneath; column whitish, flushed pale pink; fruits shiny dark green. 9/20/44

1 E-689. Orchid.
Epiphyte. Leaves pale green above, paler beneath; peduncle very pale green; bracts whitish, flecked with tiny brown spots; sepals and lateral petals greenish white, the margins slightly crisped, or not at all; lip ~~colored~~ closed above around green column, itself white, but very lightly flushed with green; fruit pale green to nearly white. In forest, La Union. ca. 4300 ft. 9/20/44

E-690. Orchid.
Pendent epiphyte. Leaves dark green; bracts pale green below fruits; fruits very pale glaucous green. In forest, La Union. ca. 4300 ft. 9/20/44

E-691. Orchid.
Climbing vine. Leaves dark green above, pale purple to green beneath; sepals and lateral petals yellow with red-brown blotches; lip with pure yellow lobes, but with crest white, blotched with red-brown, and yellow at base near columh; column pure yellow, free from lip. In forest, La Union. ca. 4300 ft. 9/20/44

E-692. Orchid.
Epiphyte. Leaves dull dark green above, pale dull beneath; perianth and column a deep dark purple, almost black; fruit shiny green. In forest, La Union. ca. 4700 ft. 9/20/44

E-693. Orchid.
Epiphyte. Leaves pale green above and beneath; bracts at anthesis brown, papery; sepals light yellow, thickly spotted with cerise on outer surfaces, not at all within; lateral petals a shade darker yellow, wuth few cerise dots at base on outer surfaces only; lip thick, subpfleshy, yellow throughout; column yellow above and at tip, but deep cerise beneath. In forest, La Union, ca.4600 ft. 9/20/44

E-694. Palicourea
Tree to 10 M. Leaves dull dark green above, pale beneath; rachis pale green, as are sepals; fruit blue-black at maturity; no flowers seen. In forest, La Union. ca. 4900 ft. 9/20/44

E-695. Orchid.
Terrestrial. Leaves dark green above, pale beneath; bracts pale green, dark purple-flecked; ovaries of same color; sepals, lateral petals a vivid orange; lip more yellow-orange, folded with open side upward, partly enclosing translucent, whitish column. In forest, above La Union. ca. 4800 ft. 9/20/44

E-696. Solanac.
Liana. Leaves dark dull green above, pale beneath; fruits with green calyces; yellowish when ripe, $3\frac{1}{2}$-$4\frac{1}{2}$ inches in diameter; no flowers. In forest, along trail above Garcia Moreno. ca.5600 ft. 9/21/44

E-697. Lobeliac.
Vine. Leaves dark dull green above, pale beneath; milky latex; calyx and bracts green; corolla dull crimson on outer surfaces, orange within; style and stigmas white; anthers light brown. Along trail, above Garcia Moreno. ca. 5450 ft. 9/21/44

E-698. Hepatic.
Thalli very dark green; antheridial and archegonial receptacles light green. On soil of roadside bank, along trail above Garcia Moreno. ca. 5450. ft. 9/21/44

E-699. Carex
Leaves light green; perigynia and scales light stramineous brown. To 1 M in height. Roadside bank, trail above Garcia Moreno. ca. 5500 ft. 9/21/44

E-700. gleichenia

2 Terrestrial. Rachis black; pinnae dark shiny green above, pale green and lightly rusty tomentose beneath, especially when young; sori brown. Along roadside bank, trail above Garcia Moreno. ca. 5600 ft. 9/21/44

3 E-701. Musci

Leaves light green. On falleb log, along trail above Garcia Moreno. ca. 5600 ft. 9/21/44

2 E-702.

Terrestrial. Rachis black, pinnae light green. On roadside bank, along trail above Garcia Moreno. ca. 5600 ft. 9/21/44

4 E-703. Lycopodium cernuum

Terrestrial. Stem trailing, branches erect or sprawling; cones pendent. Roadside bank, along trail above Garcia Moreno. ca. 5600 ft. 9/21/44

2 E-704.

Terrestrial. Rachis black with rusty hairs; pinnae dark dull green above, paler beneath; indusia dark brown. Along roadside, trail above Garcia Moreno. ca. 5650 ft. 9/21/44

3 E705. Manettia

Vine. Leaves dull green, short hairy above, pale beneath; corolla tube greenish white, swollen at base, hairy; lobes white, bearing long white hairs. Roadside, along trail above Garcia Moreno. ca. 5650 ft. 9/21/44

2 E-706. Manettia

Vine. Leaves shiny dark green above, pale beneath; corolla tube deep lavendar, circa 1 cm. long, smooth, the lobes deep lavendar but covered with long white hairs. Roadised, along ttrail above Garcia Moreno. ca. 5650 ft. 9/21/44

2 E-707. Rubiac. Gonzalagunia

Shrub to 1½ M. Leaves dull dark green above, white tomentose beneath; calyx white tomentose; corolla white tomentose on outer survace, whitish, the lobes white, slightly pink tinged; fruit white, pulpy. Roadside, trail above Garcia Moreno. ca. 5650 ft. 9/21/44

2 E-708. Orchid.

Epiphyte. Sepals chocolate brown, with margins yellow; lateral petals similar in shape and color; lip similar in color, except for pure yellow crest on upper surface; column green below, dark purple at tip; leaves shiny dark green above, paler beneath. On shrubs, perched on boulder, at crossing of Intac trail, Rio Asabi. ca. 7000 ft. 9/23/44

1 E-709. Odontoglossum

Terrestrial. fronds dull green. On bank, along Intac trail between Asabi and Maenala. ca. 9500 ft

Maenala 9/23/44

1 E-710. Palicourea

Small tree. Leaves very dark glossy green above, pale dull beneath; rachis greenish purple; calyx pale green; corolla tube faintly

E-710. (Continued) flushed with magenta at base, otherwise white; lobes white; fruit a brilliant china-blue. In forest along Intac trail, between Asabi and Muenala, ca. 9600 ft. 9/23/44

E-711. Lycopodium
Terrestrial. On bank, near camp, Palo Seco (Las Ventas), above Calvario. ca. 7500 ft. 9/23/44

E-712. ~~Diodia~~ Borreria
Herb. Flowers white; leaves pale green; stems brown in lower portions. On dry bank, along Intac trail between Calvario and Asabi. ca.7300 ft. 9/23/44

E-713. Palicourea
Small tree. Leaves rather dull dark green above, pale dull beneath; rachis olive-brown to pink; corollas vivid cerise; no fruits found. In forest along Intac trail between Calvario and Las Ventas. ca. 7000 ft. 9/22/44

E-714. Orchid.
Terrestrial. Leaves pale green above, paler beneath; bracts on peduncles pale brownish green when young, becoming dry and papery in age; sepals deep yellow at base, red-brown, attenuate at tips; lateral petals almost wholly deep yellow, the margins slightly crisped; lip deep yellow, but purple-spotted beneath and on sides of lobes; column nearly white, purple-ringed at tip, and light purple-dotted on inner surface. On bank, along trail, Intac trail above Calvario. ca. 7200 ft. 9/22/44

E-715. Orchid.
Terrestrial or semi-epiphytic. Leaves thin, pale green; fruits thick, heavy, dark greenish purple; peduncle pale green, bearing 3 to 4 large flowers: sepals pale green, fleshy, slightly revolute; lateral petals same color and shape- both sepals and petals about 1 cm. long by 6-8 mm. wide; lip ~~scarlet~~saccate (like Cyprepidium), 3-4 cm., thick, fleshy, pale dull green on outer surface, shiny yellowish green within; column massive, yellow-green, 8 mm. long. On boulder, near stream, along Intac trail between Monopamba and Apuela. ca. 5000 ft. 9/22/44

E-716. Orchid.
Epiphyte. Leaves dark shiny green above, pale shiny green beneath; peduncles, bracts pale shiny green; sepals velvety hairy on outer surfaces, dull olive-green, with pattern of veins of brighter green, inner surfaces shiny pale green; petals velvety hairy outside, involute, olive-green, with pattern of veins a brighter shade of green; column hairy at tip, the entire structure pure white; peduncles velvety hairy. Along Intac trail between Apuela and Calvario. ca. 5500-6000 ft. 9/22/44

E-717. Orchid.
Epiphyte. Leaves pale green, slightly shiny above; peduncle, bracts pale green-white; sepals cream-white; petals reduced, pale whitish green; column pale whitish green. Along Intac trail between Apuela and Calvario. ca. 5500-6000 ft. 9/22/44

FOREIGN ECONOMIC ADMINISTRATION

BOGOTA, COLOMBIA

MEMORANDUM

To: Morrison
cc: Fosberg

Date: Jan. 16, 1945.

From: Grant M.L. Grant

Subject: Shipment of plant specimens collected by the Colombian Cinchona Mission botanists

Box No.	Collector and Package Nos.
1	Core 1-32
2	" 33-55
3	" 56-84
4	Ewan 1-39
5	" 40-56
6	Fassett 1-20
7	" 21-40
8	St. John 1-12
9	" 13-23,25
10	Core 85-96
11	Core 97-101; St. John 24,26-30
12	Fosberg 1-40
13	" 41-67
14	" 68-94
15	" 95-107
16	" 118-139
17	Fassett 41-66
18	Ewan 57-72
19	Miscellaneous 1-42
20	Fassett 67-73; Core 102-04; Ewan 73-77; St. John 31-34
21	Fosberg 140-50; Misc. 43
22	Little 1-6,8-15,17-50
23	" 51-98
24	" 99-101,106-130,132-45
25	" 146-149,152-165; St. John 35-37; Fosberg 151; Ewan 78-81; Misc. 44-53,55.
26	Grant 1-20,33
27	" 21-32,34-44
28	" 45-56; Misc. 54,56-60.

unpacked

FOREIGN ECONOMIC ADMINISTRATION
Bogotá - Colombia

M E M O R A N D U M

January 15, 1945

To: Core, Ewan, Fassett, Fosberg, Grant, Kernan, Little, McComb, St.John, and Morrison.

From: M. L. Grant

Subject: Shipment of herbarium specimens

The herbarium specimens of the botanists have been shipped to Buenaventura, will leave there by boat January 20, arrive in New York about January 30-31, and should be available at the National Arboretum in Washington the first week in February.

The plants are wrapped in brown paper. Each package has on the outside a tag bearing the name of the collector and the list of field numbers enclosed. The individual packages are numbered serially, the arrangement being roughly chronological by field numbers (there are minor irregularities).

The packages are packed in large wooden boxes, lined with asphalt roofing-paper. These boxes are numbered, and, in looking for your particular specimens in Washington, it will possibly be necessary to ask for the boxes by number.

Appended to this memorandum is a list of the contents of each package, and the numbers of the boxes in which the packages may be found. Field numbers are inclusive (except those in parentheses), and the first digits, when identical, are not repeated. "N.n." means without numbers, "n.d." without data, and "c.d." with data.

For those botanists who are still collecting, or whose plants have not been fully cared for, an additional shipment will be made about the end of March. Boxes 1 - 25 have already been shipped.

Packages of Plant Specimens Collected by Earl L. Core in Colombia

Package №	Field Nos.
1	n.n.
2	1-39
3	33, 35, 60, 61, 67
4	43-46, 49-51, 57
5	72-74, 79, 81-83
6	104, 106-8, 112-14, 116-19
7	120-25, 137-8
8	142-6, 159
9	160-1, 169-77, 180, 190-1,194
10	205-10
11	207,275,393-9
12	211-26
13	230,233-41,243-9
14	254,259,263-7
15	282-91,295-6,300,302,306-9
16	310,312-3,315-22,325-9
17	330,332,334-49
18	350-67
19	368,371,373-9
20	380-92
21	400-414
22	415-17,420-1,423-4,426-7,429
23	430-32,435
24	437-40,442-3,447
25	444-59
26	460-465,468,471-2
27	476-79,540-49
28	480-85,487-8,491-4,6,7,9
29	500,502-19
30	520-35
31	550-52,557-69
32	570-92,596-9
33	600,602-4,606-8,612-17,619
34	620-2,625,627-8,631,633-9
35	640-52,654,656-9
36	623-4,626,629,632,653,655,657 674,678,719,780-6
37	660-1,663,665,668
38	671-3,675-9
39	680-1,685,687-96,699
40	700-2,704-19
41	720, & n.n.
42	721-39
43	740-59
44	760-79
45	787-99, 870-2
46	800-19
47	820-45, 847-9
48	850-69
49	873-82,886-9
50	890-99
51	900-14,916-18
52	920-26,928-9
53	930-49,951-9
54	960-79
55	980-94,996-9
56	1000-19
57	1021-2,1027-40,1046-7
58	1051-3,1055-70,1072-4
59	1075-9,1140-3
60	1080-8,1090-9
61	1100-19
62	1120-39
63	1075-6, 1469
64	1144-59
65	1165-72,74-79
66	1180-83,85-99
67	1200-19
68	1220-39
69	1240-59
70	1260-79
71	1280-81,83-88,90-99
72	1300-19
73	1320-38
74	1340-9,1353-9
75	1360-72,74-79
76	1380-99
77	1400-19
78	1420-29
79	1430,32-39
80	1440-49
81	1450-68
82	1470-74,76-89
83	1490-1503
84	1520-39
85	1540-59
86	Cinch. #1 (33-75)
87	" 2 (130-55)
88	" 3 (163-99)
89	" 4 (204-428)
90	" 5 (433-95)
91	" 6 (593-655)
92	" 7 (662-703)
93	" 8 (915-1071)
94	Lad. (498-1026)
95	?
96	1504-10
97	1560-73
98	1574-89
99	1590-3,1599-1609
100	1610-14,16-28

Package Nº	Field Nos:
101	1640-5,7,9,1650-2
102	1630-39
103	1653-59
104	1660-78

Disposition by Boxes

Box Nº	Package Nos.
1	1-32
2	33-55
3	56-84
10	85-96
11	97-101
20	102-4

Packages of Plant Specimens Collected by Joseph A. Ewen in Colombia

Package Nº	Field Nos.
1	15571-89
2	15590-609
3	15610-19
4	15620-29
5	15630-39
6	15640-49
7	15650-59
8	15670-81
9	15680-89
10	15675,90-99,750-2
11	15700-12,14-19
12	15720-28,30-32,34-39
13	15740-42,44-52
14	15753-59
15	15760-79
16	15780-90,92-99
17	15801,5-9,16-19
18	15810-15,20-29
19	15830-49
20	15850-69
21	15870-89
22	15890-906
23	15906-19
24	15920-29,898
25	15930-39
26	15940-49
27	15950-65
28	15966-79
29	15980-99
30	16000-09
31	16010-19
32	16020-29
33	16030-39
34	16040-49
35	16050-59
36	16060-63,65-79
37	16080-86,88-9
38	16090-99
39	16100-6,9-10,16-19
40	16120-39
41	16140-49
42	16150-58
43	16162-65,67-74
44	16175-79
45	16180-89
46	16190-94,96-99
47	16200-09
48	16210-19
49	16220-1,23-29
50	16230-39
51	16240-46,48-9
52	16250-59
53	16260-69
54	16270-79
55	16280-89
56	16290-98
57	15660-69
58	16300-9
59	16299,310-19
60	16320-29
61	16330-39
62	16340-9
63	16350-9
64	16360-1,63-9
65	16370-81
66	Cinchona (16064-222)
67	Cinchona, Ladenb. (16729-43)
68	Cinchona (16163-346)
69	Cinchona (15938-16076), Remijia(15989)
70	Ladenbergia (16022-305)
71	Cinchoneae (15945-16277)
72	16385-99
73	16400-19
74	16420-39
75	16450-69
76	16470-81
77	16440-49
78	16490-99
79	16500-19
80	16520-39
81	16550-60

Disposition by Boxes

Box Nº	Package Nos.
4	1-39
5	40-56
18	57-72
20	73-77 (also coll. of other men)
25	78-81 (" " " " ")

Packages of Plant Specimens Collected by Norman C. Fassett in Colombia

Package №	Field Nos.
1	25281,25300-8
2	25294-9,25321-3,25328,25353-9
3	25360-66,68-9,73
4	25367,70-72,74-79
5	25402,4-5,25500-9,(25346?)
6	25406-19
7	25420-25424,25426-39
8	25440-46,48-53
9	25454-9,25388-90
10	25460-69,73-79
11	25480-99
12	25510-15,19-27,29
13	25513,16-18,29
14	25532-40,44,46-9
15	25550-1,54-7,59-60,62,64-9
16	25570-75,79-87
17	25590-619
18	25620-29,70-79,25588-9
19	25630-49
20	25650-69
21	25680,82-92,95-99
22	25700-12,14,15,17,18
23	25721-39
24	25740-44,46-9
25	25750,52-55,57-69
26	25770-79
27	25780-2,84-9
28	25790-99
29	25800-9
30	25810-19
31	25820-9,50
32	25830,40-9
33	25852-69
34	25870-87
35	25587-99
36	25900-19
37	25920-39
38	25940-49
39	25950-55,57,58,60-69
40	25970-89
41	25990-26000
42	25232-5,39-42,45-9
43	25250,3,62,68,9
44	25092,4,25206,80
45	Cinchona (25681-756)
46	C.off.(25104-200)
47	C.pub.(25548-78)
48	" (25088-187)
49	C.hen.(25121-244)
50	" (25543-52)
51	C.cac.(25160-285)
52	Remijia(25314-407)
53	" (25342-472)
54	"? (25201-87)
55	Lad. (25317,44)
56	" (25542-63)
57	Quinone(25050-230
58	Remijia(25309-403)
59	Rubiaceae(25020-127)
60	" (25030-166)
61	" (25040-293)
62	" (25048-290)
63	" (25060-107)
64	" (25060-217)
65	" (25082-148)
66	" (25171-224)
67	Mass (25057-218
68	n.n.
69	25328 (2 logs)
70	26040-5
71	26001-9,30-39
72	26010,12-29
73	Bark samples

Disposition by Boxes

Box №	Package Nos.
6	1 - 20
7	21 - 40
17	41 - 66
20	67 - 73

Packages of Plant Specimens Collected by F. Raymond Fosberg in Colombia

Package №	Field Nos.
1	19037-62
2	19063-74
3	19075-99
4	19100-01,03-15,18-20,22-24
5	19125-33,36-47
6	19150,52,54,55,57-74
7	19175-99
8	19200-20
9	19221-49
10	19250-75
11	19276-99
12	19300-12
13	19313-49
14	19350-53,55-70,72-74
15	19375-99
16	19400-10,12-24
17	19425-45,48,49
18	19450-74
19	19475-99
20	19500-24
21	19525-49
22	19550-74
23	19575-617,19,20,23
24	19625-58,60-74
25	19675-99
26	19700-29
27	19730-38,40,42-53,55-57,59-79
28	19780-95,98-01,04-08,10-22
29	19823,24,26-34,36-51,53,55-59 61-69
30	19870-909,11-29 (exc.10 Cinchonae)
31	19931,33,35,37-57,59-64
32	19966-73,75-99
33	20000-15,17-20,22-39
34	20040-51,54-56,59-63,66-70
35	20073,75-98
36	20121-27,29,32-34,36,38-49
37	20150-99
38	20200-30
39	20250-77,79-99,01,03-19
40	20320-36,38-49
41	20350-57,59-62,64-73,75-98
42	20400-13,15-25 (32!)
43	20450-52,54,56-63,65-67,69-71 73-99
44	20500-37 (exc.45,7,9,51,5!)
45	20569-99
46	20600-20
47	20650-81,83-89,91-94
48	20700,02-21,23,24,26-57
49	20776-80 (exc.70,82)
50	20841-84,86,88,90,91,93-923
51	20930,31,34-60(exc.74,6!)
52	20980-85,87-21023,25-29
53	21030
54	21063-71,73,75,76,78,80-86,88,90-99
55	21100,02,04,05,08-11,13-30(exc.48!)
56	21151,53,55,57-99
57	21200-20,22-39
58	21240-47,49-51,54,56-58,60-72,74-77
59	21285,88-91,94-08,10-12,14-17,18, 320,22,23,28,31,33,35-39
60	21340-79
61	21382,84,86,88,90,91,93-95,98-03,06-09
62	21410,11,13-15,17-19,21,23-41,44-59
63	21460-66,68,69,74,76,79-93,95-99
64	21500,04-25,27,30-31,33-35,37,38
65	21540-42,45,47-70,72,75-77
66	21581-83,85,87, 89-95,97,03,04,06-619
67	21620-69 (exc 17@inchonas)
68	21671-75,77-80,83-99
69	21700-24,27-29
70	21731,33,36,38-39,41-44,49,51-59
71	21700-64,66-75,77-79
72	21780-88,90-99
73	21801,02,04,05,07-11,13-17
74	21821,29,31,33-36,43,44,48-59
75	21850,54-56,60-68
76	21871-74,76-79
77	21880-99
78	21900-07,10,12,14,19
79	21920-23,25-29
80	21960-67,70-72
81	21973-87
82	n.n. (1 spec.)
83	21988-99
84	22000-9,30-32,34
85	22001-12,14-29
86	22035,39(C.pub.,unlabelled)
87	22036-8,22040-9
88	22050-63,65-67
89	22074,76-86,89
90	22089-99
91	22100-19
92	22120-36
93	28160-66,68
94	28182-91,93-99
95	22210-29
96	22230-38,40-49
97	22250-69
98	22270-84,86-89

Package №	Field Nos.
99	C.off. #1 (19121-628)
100	" 2 (19904-20374)
101	" 3 (20545-21325)
102	" 4 (21334-92)
103	" 5 (21470-8)
104	" 6 (21646-58)
105	" 7 (21725-35)
106	" 8 (21740-50)
107	" 9 (21852-969)
108	C.pub. 1 (19102-294)
109	" 2 (19308-888)
110	" 3 (19890-20074)
111	" 4 (20135-555)
112	" 5 (20891-21101)
113	" 6 (21103-21281)
114	" 7 (21282-313)
115	" 8 (21317-89)
116	" 9 (21396-420)
117	" 10 (21494-529)
118	" 11 (21532-79)
119	" 12 (21580-99)
120	" 13 (21600-34)
121	" 14 (21636-62)
122	" 15 (21644-81)
123	" 16 (21735-804)
124	" 17 (21845-7)
125	" 18 (21851-908)
126	C.pit. 1 (19854-21152)
127	" 2 (21154-293)
128	C.hen. 1 (21805,6,12)
129	Remijia (19446-21443)
130	" (21776-832)
131	" (21837-42)
132	" (22069-87)
133	C.barb. (21221)
134	Lad. #1 (19116-288)
135	" 2 (19375-659)
136	" 3 (19796-857)
137	" 4 (19881-978)
138	" 5 (20058-495)
139	" 6 (20932-21330)
140	" 7 (21383-21576)
141	" 8 (21405,13)
142	" 9 (21586-968)
143	22200-09,22300-9
144	22320-30
145	Joosia,Cosmib.(19354-21329)
146	22290-2,4-9,22310-19
147	22331-49
148	22350-57,59-69
149	22370,71,73-79
150	22380-92
151	22400-14

Disposition by Boxes

Box №	Package Nos.
12	1-40, & literature
13	41-67, & literature
14	68-94
15	95-117
16	118-39
21	140-50
25	151

Packages of Plant Specimens Collected by Martin L. Grant in Colombia

Package №	
1	Fungi - Bryophytes
2	Cyatheaceae
3	Equisetaceae - Hymenophyllaceae
4	Lycopodiaceae - Schizaeaceae
5	Polypodiaceae - Misc.
6	" A - Blecknum
7	" Crypt.- Elaphog.
8	" E - Polypodium
9	" Polypodium - V
10	Gymnosperms; Monoc: A - Burman.
11	Monoc.:Bromeliaceae-Cyperaceae
12	" Gramineae
13	" Dioscoreaceae-Gingiberaceae
14	" Orchidaceae
15	" "
16	Dicots:A-Bignoniaceae
17	" Bixaceae-Chloranthaceae
18	" Compositae
19	" Convolv.-Ericaceae
20	" Euphorb.-Gesneriaceae
21	" Guttiferae-Lauraceae
22	" Leguminosae-Loranthaceae
23	" M.
24	" Melastomaceae
25	" Myrsinaceae-Polygalaceae
26	" Polygonaceae-Scrophulariaceae
27	" S-Z
28	Rubiaceae:A-C
29	" C.officinalis -1
30	" " 2
31	" " 3
32	" " 4
33	" " 5
34	" C.pubescens
35	" D. Hamelia
36	" Hedyotis-Nortera
37	" Ladenbergia macrocarpa
38	" Ladenbergia
39	" Palicourea
40	" Posoqueria - Randia
41	" Remijia - W.
42	10614-30
43	10631-54
44	10655-82
45	Misc. stems
46	Misc. packets
47	Cinchoneae wood & bark
48	Misc. packets
49	Wood & fiber specimens
50	Fiber specimens

Package №	
51	Wood & fiber specimens
52	Dried specimens
53	" "
54	Wood specimens
55	Fiber specimens
56	Preserved specimens

Disposition by Boxes

Box №	Package Nos.
26	1-20,23
27	21-32,34-44
28	45-56

Packages of Plant Specimens Collected by Henry S. Kernan in Colombia

Package №	Field Nos.
Misc. 12	101-19
" 13	120-30,32-9
" 14	140-50
" 15	151-67
" 16	168-70
" 39	1-31
" 40	32-49
" 41	50-64
" 42	65-75
" 43	76-90
" 44	91-100
" 59	15,19,101-29
" 60	130-50

Disposition by Boxes

Box №	Package Nos.
19	12-16,41-42
21	43
25	44
28	59-60 (to be shipped in March).

Packages of Plant Specimens Collected by Elbert L. Little Jr. in Colombia

Package №	Field Nos.	Package №	Field Nos.
1	7002,4-5,10-12,14-15,17-19	51	7690-5
2	7020,3,5-6,28-39	52	7696-9
3	7040,2-8,51-9	53	7700-9
4	7060-79	54	7710-1,6-9
5	7080-86,88-99	55	7720-8
6	7100,02-16,18-19	56	7731-6,8
7	(removed)	57	7740,3-9
8	7120,2-9	58	7750,6-7,9
9	7130,32-49	59	7762-9
10	7151-9,7300-9	60	7770-1,3-4,7,9
11	7160-75,77-79	61	7780,4-6,90-1,3-8
12	7180-4,88-90,95-7	62	7800-7,9
13	7164,80-2,6-7,99,7455-9,8108	63	7810-15
14	7200-18	64	7831
15	7220,28-39	65	7864-6
16	(removed)	66	7900-9,8050-1,5
17	7240-3,7-8,7251-8	67	7911-9
18	7260-5,7,9,71-9	68	7920,22-35,39
19	7280-82,84-91,93-99	69	7940-2,5-6,8-9,50-9
20	7310-22,24,26-9	70	7963-5,69-79
21	7330,1,5-9,61-7	71	7981-99
22	7340-46,48-51,53-59	72	8001-15,18
23	7368-73,75-6,78	73	8020-36,9
24	7380-5,7-9,91-9	74	8041-3,45-59
25	7400-6,10-19	75	8060-75,7-9
26	7420-1,3,5-9	76	8080-5,9,7898-9
27	7430-2,9	77	8090-5,8-9,8101-9
28	7460-5,7-9	78	8110-6,8,21-3,25-9
29	7470-7,9	79	8130-9
30	7480-6	80	8141-5,48-50
31	7493-9	81	8177
32	7500-8	82	8198-9
33	7510-6	83	8201,3-9,11,15,17
34	7520-3,6	84	8219-29
35	7531,5-9	85	8231,3,5-40,42-9
36	7540-2,7	86	8250-61,3-9
37	7550-8	87	8270-9,8320-5,7-9
38	7560-9	88	8280-7,92,94-9
39	7570-5,8	89	8300-13,15-19
40	7580-5	90	8330-9,48
41	7594-9	91	8350,2-4,6-7,9-60,62-5
42	7600-9	92	8371-3,80-9
43	7610-19	93	8390-8404,6-9
44	7620-2,7-9	94	8410,14-24,6,9
45	7630-1,3,6-9	95	8432-9
46	7640-3,5-8	96	8440-1,3-50,2-6,8-9
47	7651-5,7-9	97	8460-4,6,8-75,7-9
48	7661-2,7-9	98	8480-94,9
49	7670-9	99	8500-11,13,17-19
50	7680-13-9	100	8523,6-7,29-34,6-9

Package Nº	Field Nos.
101	8540-52,5-9
102	) Removed
103	) by
104	) Mrs.
105	) Little
106	aff.Elaeagia 7528-7782
107	Guettarda 7632,7656,7713
108	8560-4
109	8615-17,19-24,26-9
110	8630-41,5-9
111	8650-69
112	8670-88
113	8691-4,6-8,8431
114	8700-6,8-11,13-19
115	8720-2,4-31,33-8
116	8740-49
117	8750,5-9
118	8760-7,9-79
119	8780-9
120	8790-9
121	8800-9,11-14,16-19
122	8820-5,7-32,3-5,7-8
123	8840-5
124	8860-1,3-6
125	8871-3,5-9
126	8880-7,9-99
127	8900-1,7-9,30-31
128	8911-3,5-9
129	8920-9
130	8934-5,7-9
131	(removed)
132	C.off. (7006-131)
133	" (7067,7549,8200,18)
134	" (7488-7817)
135	" (7490-8838)
136	" (7624,82)
137	C.pub. (7001-408)
138	" (7408-8216)
139	" (7517-8768)
140	" x off. (7545)
141	Remijia mac.(7553-61)
142	" ped.(7150-758)
143	Lad. (7003-7776)
144	" (7220-8528)
145	" (7954-8904)
146	" (8689-8902)
147	Cosmib. (7198-8699)
148	Macroc. (7492,8723,8815)
149	Coutarea(8076,96)
150	Ficus (8618-8951) Kept here
151	Ferns (8642,8944) Kept here
152	C.off. (8992-9052)
153	Remij.ped. (9084-99)
154	" (9100-20)
155	Ladenbergia (8993-913)
156	8970-90,97
157	9001,5,10,11,4,6,8,9
158	9020,2,4-6,8-38,41
159	9060-8
160	9071-3,6-9
161	9082,4,7-9,9101,9,10,11,14
162	9121-9
163	9130-40
164	8952-4,7-65,7-9
165	9040-45,47-59

Disposition by Boxes

Box Nº	Package Nos.
22	1-6,8-15,17-50
23	51-98
24	99-101,106,107-30,132-45
25	146-9,152-65

Packages of Plant Specimens Collected by Andrew L. McComb in Colombia

Package Nº	Field Nos.	Box Nº	Package Nos.
Misc. 18	80-90,93	19	18, 35-38
" 35	(7-49)	25	45
" 36	(50-65)		
" 37	66-73,5-9		
" 38	(94-105)		
" 45	110-16		

Packages of Plant Specimens Collected by Harold St. John in Colombia

Package Nº	Field Nos.
1	20501-15
2	20516-29
3	20530-33,35-49
4	20551,54-65
5	20570,72-4,77-89
6	20590-609
7	20610-19
8	20630-32
9	20633-39
10	20640-59
11	20660-4,20670-9
12	20680-8
13	20689-99
14	20700-19
15	20720-9
16	20730-36
17	20737-44,46-49
18	20750-69
19	20770-9
20	20780-8
21	20790-9,20810-11
22	20800-9
23	20812-15
24	20816-9
25	20820-9
26	20830-9
27	20840-4
28	Remijia (20552-72)
29	" (20620-29)
30	Led. (20571)
31	20845-9
32	20850-9
33	20860-9
34	20870, n.n.
35	20871-9,20900
36	20880-9
37	20890-9,20864

Disposition by Boxes

Box Nº	Packages Nos.
8	1-12
9	13-23,25
11	24,26-30
20	31-34
25	35-37

Packages of Plant Specimens Collected by Miscellaneous Collectors in Colombia

Package Nº	Field Nos.
1	Caicedo 1-4,6-8;Bitaco n.n.;
~~2~~	Ruiz 009;028;96
2	Cajiao 24-25,27-33,35-37
3	Calderon 26-28
4	Coffin 209-19
5	" 233-4,250-63
6	" 265-71
7	" 276-82
8	DSC Pasto 3-5,1
9	Fadul 1,3-14
10	GSF 30-33
11	Jones & Rodriguez 14-16,19-24
12	Kernan 101-19
13	" 120-30,32-39
14	" 140-50
15	" 151-67
16	" 168-70
17	Kiburz: Ladenbergia
18	McComb 80-90,93
19	Valencia 212-13
20	" 214-15
21	Viana 1-5,71
22	1-4,6-13,15-35,37-39, n.n., c.d.
23	40-60, n.n., c.d.
24	10-15, n.n.
25	C.off. 2, n.n.
26	n.n.
27	n.n., c.d.
28	Carbajal 1-15
29	" n.n.; n.& c.d.
30	Coffin 220-1,3-8,230,5-9
31	" 231,240-9
32	Hermann 10919-25
33	Jones 1-2,6,8-18,25-6
34	Valencia 186-7,208-9, n.n.
35	McComb (7-49)
36	" (50-65)
37	" (66-73,75-9)
38	" 94-105)
39	Kernan 1-31
40	" 32-49
41	" 50-64
42	" 65-75
43	" 76-90
44	" 90-100
45	McComb 110-16
46	Steere no. 1
47	" no. 2
48	" no. 3
49	" no. 4
50	Granger & Rodriguez 1-20
51	Cal.11,Diaz FD 40, Kertzman
52	Granger & Hurtado 201-29
53	Granger (251-506)
54	Gonzalez - misc.
55	Deubner - misc.
56	Saenz, Vargas, Bonitto, Klein, Diaz
57	Hurtado, etc.
58	Carvajal
59	Kernan 15,19,101-29
60	" 130-50

Disposition by Boxes

Box Nº	Package Nos.
19	1-42
21	43
25	44-53,55
28	54,56-60

LOCATION AND STATUS OF CINCHONA MISSION COLLECTIONS

Following is the location in the herbarium of the collections of the various members of the Cinchona missions, with their condition as to arrangement and labelling.

Little, E. L.

Cases 67, 187, 211, 249, 250, 251. All are unlabelled and they are arranged as Dr. Little left them. He is to write and insert the labels. One set has been deposited in Bogota, except Cinchoneae.

Ewan, J. A.

Cases 59, 60, 61, 62. All are unlabelled, though the blanks have been printed and data submitted for about half of them. We are supposed to see to the typing. The collections are sorted into families. Ewan is identifying certain of them. Mrs. Yates has blanks + data.

St. John, H.

Case 185 and part of 186. The collections are arranged numerically, they are unlabelled, the blanks have not yet come from the printer, and we must see to the typing. note are in top drawer of cabinet P1-19 1692 in attic in large envelope.

Fassett, N. C.

Case 199 is Rubiaceae, labelled and sorted to genus. Case 182 is miscellaneous labelled and sorted. The small maps must still be inserted into most of the collections, though they are all done. (in case 182)

Grant, M. L.

Cases 177 and 178. All are labelled and sorted into families. With the exception of the Rubiaceae all except two sets have been removed. Of these two sets one is for the National Arboretum, the other for Bogota.

Hodge, W. L.

Case 197, in part. Labelled and in numerical order, one set only, this for the National Arboretum. The remainder of Hodge's material is packed in two boxes ready to be shipped to him. These are in the mounting room. A set has been deposited in Lima.

Fosberg, F. R

Cases 110, 111 are Cinchoneae, part of them labelled, and the other Rubiaceae as far as they are labelled, sorted into Psychotrieae and others. Case without number next to 147, and 147 contain the first part of the numerical series, as well as most of the labelled Cinchoneae. Case 113, numerical order plus labelled Compositae. Case 202 plus parts of 161, 145, 197 and one case in my office are in numerical order. Case 259 is labelled and arranged in families. McVaugh has Campanulaceae, Rosaceae, Euphorbiaceae, and Valerianaceae that are labelled.

Drew and Core have their material and are labelling it.

Miscellaneous collectors with small collections are in cases 203, ~~196~~ and parts of 186, 197, 31, and 35, and are partly labelled.

(182)

5-14-45

TE

P. E. I. NO.

B. E. & P. Q. NO.
PERMIT NO. 088711

TERIAL Herbarium specimens

OUNT AND NATURE 4 boxes (containing 25 small boxes)

OM Cinchona Division, Foreign Economic Administration, U.S. Gov't,
R Bogota, Colombia

Plant Exploration and Introduction

REGISTRY NO.

INTERCEPTED AT Motor Transport fr N.Y.
~~4 wooden boxes (1019 lbs.)~~

Fumigated HON
27 inch vacuum
Rate 6 ounces per
Kept it for 2 hours.

Wm Jones
Br. 2490

Treated and Passed

MAY 17 1945
N. Y. Quarantine

TE ENTO. INSPECTOR DATE PATH. INSPECTOR

U. S. GOVERNMENT PRINTING OFFICE 8—6386

B/L (sent me by mrs Haines 2/5)

A799553 - 5/9/45 - 4 cases 1079 lbs

Col. -

Contents 3 rec'd; 4 lbs to come from Ing Hong

A799554 - 5/10/45 -

1 bag pl. Asm. 166 lbs.

✓ from Dieu, Guaygunil

A799556 - 5/22/45 -

1 case bat. Asm. 234 lbs.

✓ not stated where from (Little)

Africa
Engler, A. 1903

Linaceae africanae.
In his Beitrage zur flora von Afrika XXXI.
Bot. Jahrb. Engler 40: 45-47. illus. 1907.

"Cinchona" material

Colombia - all bark material is
here (assuming that material
not sent out from Eng. Harden on
23/5 is the remainder of boxes
29-32) except for one box
of mss. prepared by [illegible] (Rodway Papers 5)
enfleurged (perhaps
Pode Foster 26/5)

Don't (not) box (2) from Little to come
(Grant 26/5)

C. P. I.: Scientific Name:

Seeds Plants Cuttings of the above have failed to grow

About.....seedlings cuttings.....of the above are ready to be shifted. How many should be grown for distribution?

Remarks: Date:.....

MONDAY
MARCH 1945

5

LAST MONTH

1945 February 1945

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

March 1945

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NEXT MONTH

1945 April 1945

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

8 A. M. _____

9 A. M. _____

10 A. M. _____

11 A. M. _____

12 Noon _____

1 P. M. _____

2 P. M. _____

3 P. M. _____

4 P. M. _____

5 P. M. _____

6 P. M. _____

"Cinchona" lots recd after McV left

3 wooden boxes from W.H. Hodge
(opened by Hodge + left downstairs)

~~7 cartons from Camp (opened by Fosberg + packed in cases)~~
(partly Camp's, partly Fosberg's — unpacked by Fosberg & put away) (early May)

contents of cases 29-32 before reaching us) — 7 recd 2/5/43 (which has been unpacked & all packages here ~~left Shortly before~~ for de Grant

1 cloth-wrapped bundle from Evans, forwarded by Pittier 5/9/45 — recd ca 23 May

7

"Originally published in two portions in the Contemporary review for February and March, 1893. The postscript ... entitled 'Professor Weismann's theories,' was published in the Contemporary review for the subsequent May."—Note, p. [2] of cover.

1. Natural selection. 2. *Weismann, August, 1834–1914.

44–33803

Library of Congress QH369.S73 1893 a

[2]

Combe, Andrew, 1797–1847.

The principles of physiology applied to the preservation of health, and to the improvement of physical and mental education. By Andrew Combe ... New-York, Harper & brothers, 1839.

1 p. l., vii, [9]–291 p. illus. 15½^{cm}. (*On cover:* The Family library. No. 71)

1. Physiology.

44–33804

Library of Congress QP38.C695

[2]

61088 August 8, 1944

Col. Sims. HQ far unpacked as of 22/5/45

Fosberg - all upstairs

Ewar " "

---

all downstairs

Grant.

for John

Fassett (few)

Core (few)

3 wooden boxes from Hodge downstairs

Claudi, Claudio.

... Manuale di prospettiva, dell' ingegnere Claudio Claudi ... 9. ed., con 49 figure in 33 tavole fuori testo. Milano, U. Hoepli, 1942.

4 p. l., [xi]–xii, 76 p. xxxiii fold. pl. (diagrs.) 15½cm. (Manuali Hoepli)

1. Perspective.

44–33801

Library of Congress QA515.C6 1942
[2] 515.6

Pardo García, Luis, 1897–

... El aprovechamiento biológico integral de las aguas dulces, por Luis Pardo ... prólogo por Juan Farias Barona ... [Madrid] Sección de publicaciones, prensa y propaganda [1942]

259, [2] p. illus. 15½cm. (*His* De rebus hidrobiologicis, viii)

At head of title: Ministerio de agricultura.

1. Fresh-water fauna—Spain. 2. Fresh-water biology. 3. Frog-culture. 4. Plants, Edible—Spain. i. Spain. Ministerio de agricultura.

44–33802

Library of Congress QH96.P3
[3] 574.92946

Spencer, Herbert, 1820–1903.

The inadequacy of "natural selection," by Herbert Spencer ... London, Williams & Norgate [1893]

cover-title, 69 p. 21½cm.

Location and Arrangement of F. E. A. Cinchona Files.

The files transferred to Beltsville by the F.E.A. or U.S.C.C. are in the attic in two filing cabinets on the west side, numbered PI-19 1692 and PI-19 1691. Each cabinet has four drawers.

PI-19 1692

Top drawer--Extra copies of Colombian Cinchona Manual, ed. 2, English and Spanish; Geogrephical files from Colombia and Ecuador; lists of collection data from Colombia and Ecuador.

Second Drawer--Geographic file for Peru; Report files by name of author for Colombia (part); part of old Ecuador files.

Third Drawer--Remainder of file by author for Colombia and same for Ecuador; remainder of old Ecuador files.

Fourth Drawer--Chronological file (also numerical) of survey reports from Colombia; extra copies of Colombia reports (numerical).

PI-19 1691

Top drawer--Colombia analysis sheets; Venezuela files.

Second Drawer--Colombia analysis sheets; Bolivia analysis sheets; 1 folder and 3 packets of very miscellaneous papers; Walde, Lozano and Reed reports.

Third Drawer--Ecuador analysis sheets and laboratory records; F.E.A. central files, commodities to miscellaneous countries and through Brazil.

Fourth Drawer--F.E.A. central files, countries, Colombia to Venezuela; two photo albums.

There is also a box of photographs which is on top of the filing cabinets.

December 13, 1946

Mr. Erlanson:

Mr. Claud Horn of OFAR has telephoned to say that FEA bought a piece of property in Ecuador and their men in Ecuador have more or less inharited it for their research work on cinchona. He says they have inherited it and they have not and they are argùing now as to who really owns it. He has called the lawyer who handles the legal matters for cinchona and he (the lawyer) did not recall that there had ever been a survey made of that particular property. If it had been and is in the Washington files, it is most likely among the files that went to PEI. Mr. Horn wonders if those files are in condition so that those for Ecuador could be searched for information on the survey and purchase price of the land, particularly information as to boundaries. The property is known as Hacienda La Favorita and is also referred to as Saloya. It is located about 30 miles from Quito on the western slope on the mountain.

I have asked Mrs. Leahy about the files and she believes they are still downstairs.

MMB

This material was not found.

Dwnbery's letter +2 P. list of ident. of Rubiaceae
(Standley) + full set of master labels for his given
Archer 6 Dec. 1946

To Mr. B. Y. Morrison c.c. to Blake (via McVaugh)

4 April 1946

From F. R. Fosberg

Subj. Arrangement and status of Cinchona Mission collections and files deposited at Beltsville.

As I seem probably to be going to leave for a few months work in the Pacific, I have summarized the arrangement and status of the collections and files that I have been working with, deposited by the F.E.A. I think that with this anything needed can be found with a relatively slight effort.

The large boxes of bark samples have not yet been unpacked, as the boxes have not arrived in which they are to be filed. ~~Almmx~~ They are in the mounting room on the first floor. There are said to be 48 boxes more of bark samples which have not yet been shipped down from New York, also one that is on its way from Colombia. In the shipment of 48 boxes are certain laboratory records and a complete file of analysis sheets and a card catalog from the laboratory at Bogota. These are extremely valuable. There may also be a few items belonging to Mr. Tom Bellis, the Chemist that had charge of the laboratory at Bogota. He is now in the Food and Drug Administration in Washington. If he should want to consult and study the files I suggest that he be be given full freedom to do so. He is absolutely trustworthy, almost painfully so at times, and any work that he can be induced to do in interpreting the analytical results will be of great value to the final Cinchona monograph.

start # 249 - to check

10. Colombian Cinchona Mission. The unmounted collections are stored wherever there was space available for them. The first set, after identification is to come to us, the second is to be returned to Bogota in the case of Colombian material. The cases involved are as follows: ½ of 31(Steere, Fassett), ½ of 35 (Kernan), 59-62 (Ewan), 110, 111, 113 (all 3 Fosberg), 1/4 of 145, 147, 148, unnumbered case adjacent to 148 (all Fosberg), ~~170-191~~ (Fosberg), 197(Fosberg), ¼ of 201, 202, ½ of 203 (Fosberg), 187 (Little), 211(Little), 249-251 (Little), ½ of 252 (Core), 259 (Fosberg), 1/4 case in room 222(Fosberg), ¼ case in room 213 (already mentioned)(Fosberg), 177-178 (Grant), 182, 199 (Fassett) 185 (St. John), 186 (part St. John) (and misc. Colombian). Total, about 30 cases.

179-Harold US (Fosberg) inc. for P.R. & a few Colomb. dupls.

Little intends to write his own labels; Core is writing his labels; Ewan ~~has printed form for his~~ labels, ~~and a part of them are in room 212, in case PI-19-785, awaiting typing.~~ Fosberg is to write his labels when he gets time.

insofar as ready for typing, are typed (Nov. 1946)

201 - not Fosberg - Gunday and misc. colls.
202 Fosberg
203 - misc (Colomb.)

1 case for Walter H Hodge

Weight 31 Kilos -

Left Calais in afternoon 55 -

George B. Childress - for

Walter H Hodges

21 Suburban Road

Worcester, Mass -

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

Soils and Agricultural Engineering

DIVISION OF
PLANT EXPLORATION AND INTRODUCTION

~~PLANT INTRODUCTION GARDEN~~

Plant Industry Station
Beltsville, Maryland

May 19, 1945

To: S. F. Blake, Senior Botanist

From: F. J. Hermann, Associate Botanist

Subject: Monthly report for April, 1945

During the month of April the office received 680 specimens for identification. The number identified during the same period (including 695 sheets of Specularia on loan) was 1469.

FJHermann:jw

48 bales of barks - size?
Are new ones Penn? and Hun

Forest - Cattle are numbered ✓

all from Cattle Road dump file out door
Foreign - dark & fresh for unlabeled
will be left in 7's desk ones?
good data is with Morris (and not elsewhere)
Mine Cattle data where?
in 1919-1692? (Boot has file found in file)
itineraries - Forbes's is done but
left with Ely to copied
to copy

Hardwood Distillation

cuts for Reports — ✓
only as noted on typed list?

to John - data in 1919-1692 ✓
on edges of sheets + in reports
the smaller sets

U. S. Department of Agriculture Library

Name S. F. Blake
Bureau Belts.
Room

APR 2 '45

410.9
M35
110816

Ann. Inst. Colon.
Vol. 4, 1898.

NOT RENEWABLE PLEASE RETURN AT ONCE

PLEASE HELP SAVE MANPOWER
PUBLICATIONS NOT RETURNED
OR RENEWED WHEN DUE
COST STAFF TIME

Ralph R. Shaw, Librarian

St Johns data — given Faeber 15 June 1946

Blot returned. (6 Nov '46)